



INSTRUCTIONS

FOR

INSTALLATION AND OPERATION

OF

SLC SERIES

XENON CONSOLE

SLC 20/30,40,45,45R,70

TD-641 REV. 6.0

CHRISTIE DIGITAL SYSTEMS

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**Operator's Manual
Xenon Console, Model SLC 20/30,40,45,45R,70
TD641, Rev. 6.0**

Manufactured Under U.S. Patents 3,843,879 and 5,054,909

Other Patents Pending

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TABLE OF CONTENTS

| | |
|--|------------|
| TABLE OF CONTENTS | i |
| LIST OF FIGURES AND TABLES | iii |
| 1. Introduction | 1-1 |
| 1.1. Contents of the Manual..... | 1-1 |
| 1.2. Who Should Use This Manual?..... | 1-1 |
| 1.3. Special Notices | 1-2 |
| 1.3.1. Warning..... | 1-2 |
| 1.3.2. Caution | 1-2 |
| 1.3.3. Note | 1-2 |
| 2. Safety Precautions | 2-1 |
| 2.1. Wear Protective Clothing | 2-1 |
| 2.2. Allow Lamp to Cool | 2-2 |
| 2.3. Disconnect AC Lines Before Entering Console | 2-2 |
| 2.4. Do Not Look Directly at Lamp..... | 2-2 |
| 2.5. Avoid Fire Hazards..... | 2-3 |
| 3. General Description | 3-1 |
| 3.1. The Xenon Lamp | 3-1 |
| 4. Installation Procedures | 4-1 |
| 4.1. Unpacking..... | 4-1 |
| 4.2. Installation | 4-1 |
| 4.2.1. Leveling Feet..... | 4-1 |
| 4.2.2. Door Panels | 4-4 |
| 4.2.3. Venting | 4-4 |
| 4.2.4. Mounting the Projector..... | 4-5 |
| 4.3. Electrical Connections | 4-5 |
| 4.3.1. Verify Voltage | 4-5 |
| 4.3.2. Wiring Hook-Up..... | 4-5 |
| 5. Alignment and Checkout Procedures | 5-1 |
| 5.1. Mechanical Alignment..... | 5-1 |
| 5.2. Installation of Xenon Lamp | 5-1 |
| 6. Operating the SLC | 6-1 |
| 6.1. Safety Review | 6-1 |
| 6.2. Starting and Operating the SLC..... | 6-1 |
| 6.3. Optical Alignment and Adjustment..... | 6-4 |
| 6.4. Tilt Adjustment..... | 6-5 |
| 6.5. Replacing the Lamp..... | 6-5 |

6.5.1. Removing the Lamp 6-5
6.5.2. Installing a New Lamp 6-5
6.5.3. Defective Lamps 6-5

7. Maintenance and Adjustments 7-1

7.1. Before Opening the Console 7-1
7.2. Cleaning Optical Surfaces 7-1
 7.2.1. Cleaning Dust 7-2
 7.2.2. Cleaning Grease 7-2
7.3. Maintaining Other Surfaces 7-2
 7.3.1. Blower 7-3
 7.3.2. Igniter 7-3
 7.3.3. Air Flow Interlocks 7-3
7.4. Aligning Lamphouse Without Alignment Tools 7-3
7.5. Xenon Lamp Autofocus Adjustments (Option ABF) 7-4
 7.5.1. Autofocus Adjustment Procedures 7-4
7.6. Optimizer Reflector 7-6
7.7. Electrical Connections 7-6
7.8. Airflow 7-6
7.9. Remote Lamp Adjustment Control (Option RBA) 7-6

8. Troubleshooting 8-1

8.1. Malfunction: Power Supply Does Not Start 8-1
8.2. Malfunction: Lamp Does Not Ignite 8-2
8.3. Power Supply Output Is Low Or Not Steady 8-2

WARRANTY W-1

Appendix A: Assembly Diagrams and Parts Lists A-1

LIST OF FIGURES AND TABLES

| | | |
|-------------|---|------|
| Figure 2-1: | Protective Clothing Safety Kit Contents | 2-1 |
| Figure 4-1: | SLC Xenon Lamp Console (Front View) | 4-2 |
| Figure 4-2: | SLC Xenon Lamp Console (Rear View) | 4-3 |
| Figure 4-3: | Minimum and Maximum Exhaust Airflow Requirements for SLC Consoles | 4-4 |
| Figure 4-4: | Minimum Wire Sizes for AC Connections | 4-6 |
| Figure 4-5: | Minimum Wire Sizes for DC Connections | 4-6 |
| Figure 5-1: | Plenum, Top View | 5-2 |
| Figure 6-1: | Control Panel..... | 6-2 |
| Figure 6-2: | Optical Alignment of Xenon Lamp..... | 6-4 |
| Table 8-1: | Troubleshooting for Power Supply Does Not Start | 8-1 |
| Table 8-2: | Troubleshooting for Lamp Does Not Ignite..... | 8-2 |
| Table 8-3: | Troubleshooting for Power Supply Output Low or Not Steady | 8-2 |
| Figure A-1: | Autofocus Assembly | A-2 |
| Table A-1: | Parts List for Autofocus Assembly | A-3 |
| Figure A-2: | SLC Xenon Lamp Console (Front View) | A-4 |
| Table A-2: | Parts List for SLC Xenon Lamp Console (Front View) | A-5 |
| Figure A-3: | SLC Xenon Lamp Console (Rear View) | A-6 |
| Table A-3: | Parts List for SLC Xenon Lamp Console (Rear View) | A-7 |
| Figure A-4: | Control Panel..... | A-8 |
| Table A-4: | Parts List for Control Panel..... | A-9 |
| Figure A-5: | Manual Lamp Adjustment Assembly..... | A-10 |
| Table A-5: | Parts List for Manual Lamp Adjustment Assembly..... | A-11 |
| Table A- 6: | Parts List for Plenum, All Models (Top View)..... | A-13 |
| Figure A-7: | Power Supply | A-14 |
| Table A-7: | Power Supply | A-15 |

1. INTRODUCTION

1.1. CONTENTS OF THE MANUAL

This manual contains installation, operation, and operator maintenance procedures for Christie SLC Xenon Console. The material covered includes:

- General description
- Installation and assembly
- Alignment and checkout procedures
- Operating the SLC
- Troubleshooting.

1.2. WHO SHOULD USE THIS MANUAL?

This manual provides information suitable for various purposes.

All users should read Section 2: Safety Precautions.



Do not install, operate, maintain, or repair the SLC Xenon Lamp Console unless you have read Section 2, are familiar with the safety precautions, and have followed all warnings and instructions.

WARNING

For details on operating the projector and for general information, see:

- *Section 3: General Description*
- *Section 4: Installation Procedures*
- *Section 5: Alignment and Checkout Procedures*
- *Section 6: Operating the SLC.*

Before performing adjustments and periodic maintenance during normal operation, see:

- *Section 4: Installation Procedures*
- *Section 5: Alignment and Checkout Procedures*
- *Section 7: Maintenance and Adjustments*
- *Section 8: Troubleshooting.*

If a problem occurs, see:

- *Section 8: Troubleshooting.*

Additional reference information is contained in the appendices.

1.3. SPECIAL NOTICES

Three kinds of specific notices are used within this manual to emphasize specific information.

1.3.1. WARNING



WARNING: Indicates the presence of a hazard that can cause personal injury if the hazard is not avoided.

WARNING

1.3.2. CAUTION



CAUTION: Indicates the presence of a hazard that could cause damage to the system.

1.3.3. NOTE



NOTE: Provides additional information.

2. SAFETY PRECAUTIONS

This section highlights the major dangers of working with the SLC Xenon Console. Appropriate safety measures must be taken at all times.

2.1. WEAR PROTECTIVE CLOTHING



POSSIBLE EXPLOSION HAZARD!

WARNING

Xenon compact arc lamps are under high pressure. The lamps must be handled with great care. They may explode if dropped or mishandled. Whenever the protective cover is removed from the lamp, authorized protective clothing **must** be worn!

Protective clothing includes, but may not be limited to, rubberized cotton gloves, double-layer 0.040-inch acetate face shield, and quilted ballistic nylon jacket. A Protective Clothing Safety Kit (Part Number 598900-095) is available from Christie. Figure 2-1 lists the contents of the Safety Kit.



Wear protective clothing when protective cover is removed from lamp.

WARNING

Instructions from Christie regarding protective clothing are subject to change. Any local or federal specifications take precedence.

| Part Number | Item |
|-------------|---------------|
| 598900-092 | Safety Jacket |
| 598900-093 | Safety Mask |
| 598900-094 | Safety Gloves |

Figure 2-1: Protective Clothing Safety Kit Contents

2.2. ALLOW LAMP TO COOL



If the lamp has been in use, wait at least ten minutes after shut-off before opening the lamp housing.

WARNING

The ten-minute waiting period allows the internal lamp pressure to drop to a level at which it is safe to work while wearing the authorized protective clothing. Again, **always** wear protective clothing when the protective cover is removed from the lamp.

2.3. DISCONNECT AC LINES BEFORE ENTERING CONSOLE



Turn off the breaker at the building AC power distribution panel before entering the console.

WARNING

Always turn off and disconnect power lines before entering the console. This protects against accidental electrical shock.

2.4. DO NOT LOOK DIRECTLY AT LAMP



NEVER LOOK DIRECTLY AT THE LAMP!

WARNING

Serious and permanent eye damage can be caused by the ultraviolet radiation of the lamp. Never attempt to open the console while the lamp is on. Always follow directions for opening console and exposing the Xenon lamp. (See Section 5.2.)

2.5. AVOID FIRE HAZARDS



FIRE HAZARD: Keep hands, clothes, and combustible material away from the concentrated light beam in front of the snood.

WARNING

Use extreme caution when working around the SLC Xenon Console. Fire danger may arise from heat, electrical current, or the concentrated light beam emitted by the Xenon lamp.

3. GENERAL DESCRIPTION

This SLC Xenon Console is a series of projection illumination systems that combine the rectifier DC power supply and projector base with a Xenon lamphousing into a single, integrated unit with a minimum of installation and wiring expense. These consoles are designed for use with any standard 35-mm or 35/70-mm motion picture projector head.

3.1. THE XENON LAMP

The SLC Xenon Console utilizes a highly efficient optical system to obtain maximum light output with extreme ease of operation and high reliability. This is accomplished by using a horizontally operated Xenon lamp within a deep, explosion-proof reflector. For maximum efficiency, the reflector has a computer-generated, aspheric shape. The high-voltage igniter (Item 2 in Figure A-3), required for starting the Xenon lamps, is included within the enclosure.



Authorized protective clothing must be worn when protective cover is removed from lamp.

WARNING

For lamp description, recommendations, and warranty information, see the Christie (or equivalent) lamp instructions.



SLC Consoles are equipped with a double interlock system on the lamp access doors to extinguish the lamp if the enclosure is accidentally opened. Keyed locks are provided on all access doors.

4. INSTALLATION PROCEDURES

4.1. UNPACKING

Follow these instructions if the unit is crated.



Christie recommends that the unit be moved to the installation site before uncrating.

1. Be sure container is upright.
2. Open crate and remove packing.
3. Carefully remove unit from crate.
4. Thoroughly inspect unpacked unit for damage that may have occurred during shipping.



Any damage discovered should be reported to the transportation company at once for inspection and filing of claim.

4.2. INSTALLATION

Place console in intended operating location in projection booth.

4.2.1. LEVELING FEET

Install four (4) leveling feet by screwing one into each of the four corners underneath base until about 1/2 inch of thread remains exposed. (See Item 8 in Figure 4-1.)



Christie recommends carefully tilting the console to one side to install the first two feet, then tilting it to the other side to install the other two feet. An assistant is required to do this safely.

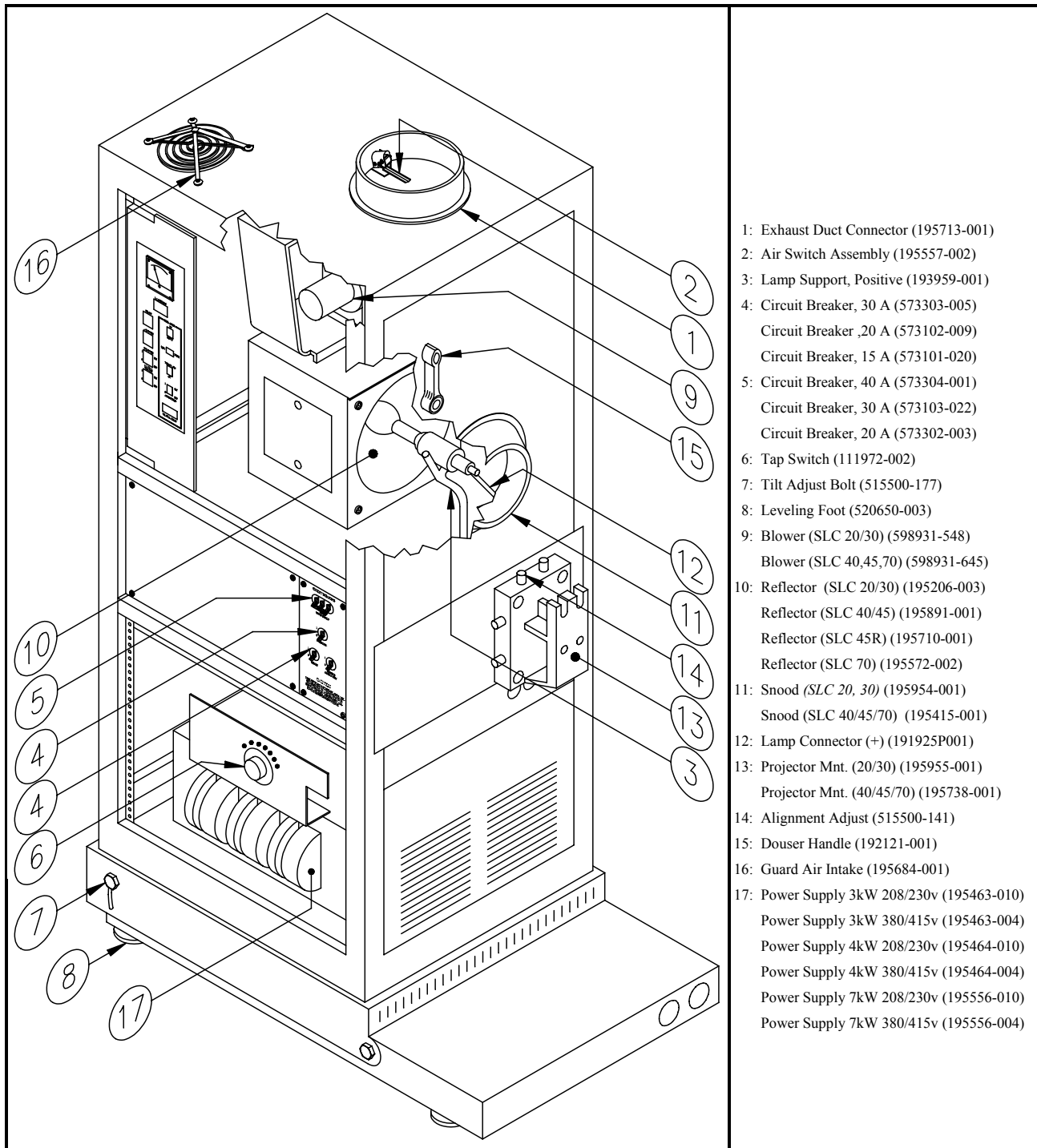


Figure 4-1: SLC Xenon Lamp Console (Front View)

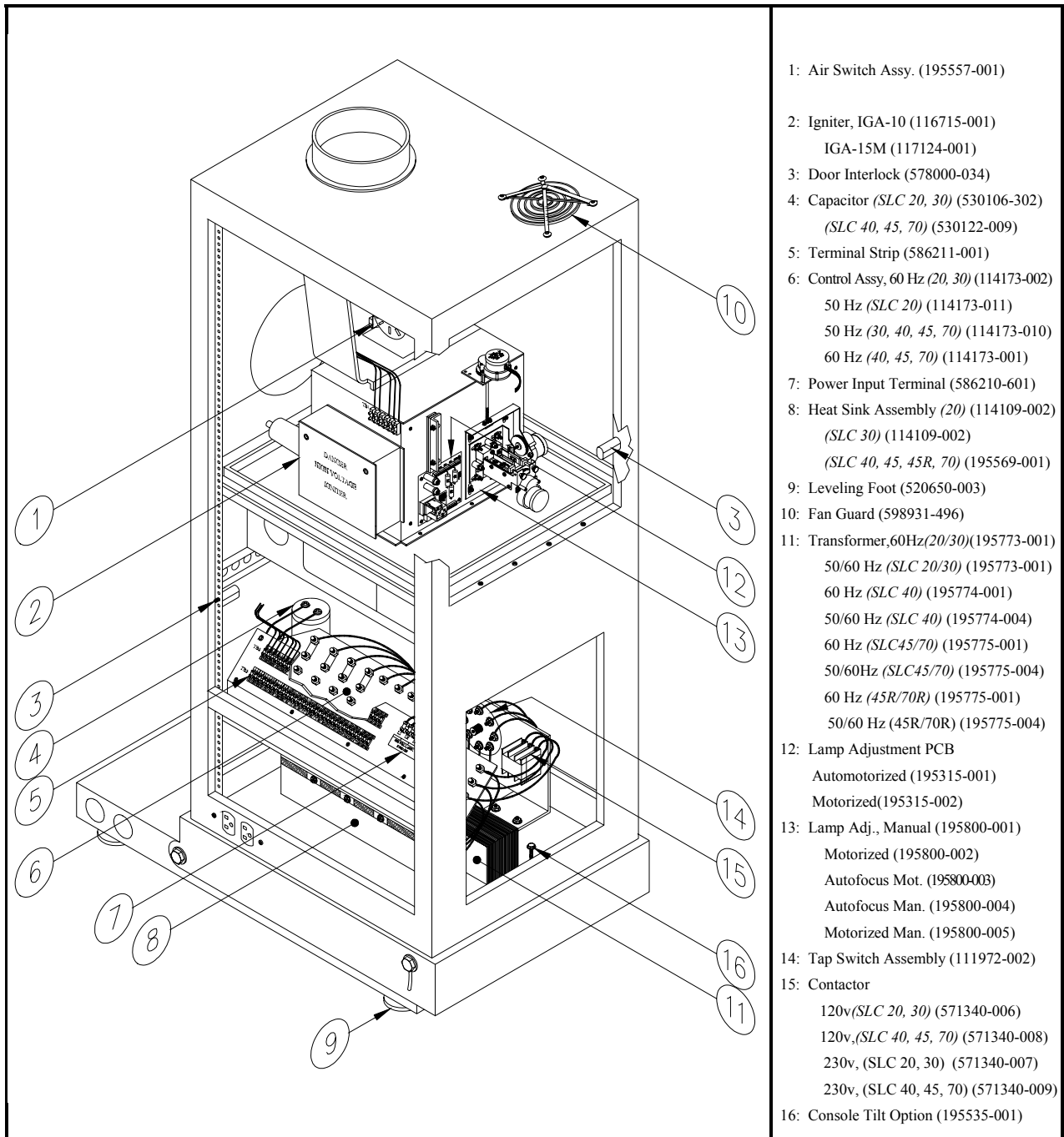


Figure 4-2: SLC Xenon Lamp Console (Rear View)

4.2.2. DOOR PANELS

All three door panels are removable for easier access to the interior of the console during installation and maintenance.

To remove door panel:

1. Unlock key-lock.
2. Open door.
3. Push down on spring-loaded pin hinge.
4. Remove panel.

To install door panel, reverse the above procedure.

4.2.3. VENTING

It is necessary to vent hot exhaust air from console to the outside of the building.

1. Connect a eight-inch inner-diameter, flexible, fireproof ducting material to exhaust duct (Item 1 in Figure A-2) on top of lamphouse.
2. Ensure that there are no obstructions in ducting, and that air intake openings of console are unobstructed.

If ozone-free lamps are used, a short, vertical exhaust stack may be used, provided local codes do not require the exhaust to be vented directly outside.

External exhaust air extraction is required. Minimum and maximum exhaust airflow requirements for all SLC series models are shown in Figure 4-3.

| Model | Minimum Exhaust (ft³/min) | Maximum Exhaust (ft³/min) |
|-----------------|---|---|
| SLC 20 | 300 | 400 |
| SLC 30 | 350 | 450 |
| SLC 40 | 450 | 550 |
| SLC 45, SLC 45R | 550 | 750 |
| SLC 70 | 750 | 900 |

Figure 4-3: Minimum and Maximum Exhaust Airflow Requirements for SLC Consoles

4.2.4. MOUNTING THE PROJECTOR

The SLC Console includes a standard projector mounting bracket for Christie P35 projectors. If any other model projector is to be mounted, contact the Christie factory.

1. Mount projector on projector mounting bracket (Item 13 in Figure A-2).
2. Ensure that projector is level and in line with console before tightening mounting bolts.
3. Verify that all four (4) bolts are installed and securely tightened.

4.3. ELECTRICAL CONNECTIONS

SLC Consoles are factory wired and tested. All functions have been carefully tested and calibrated to prevent problems during installation and operation.



Turn off all breakers at the building AC power distribution panel before connecting the console.

WARNING

4.3.1. VERIFY VOLTAGE

Check the AC voltage shown on the console nameplates. Then measure the AC supply voltages with a voltmeter. Verify that the measured voltages do not differ by more than 10% from the rated nominal values of the unit.

4.3.2. WIRING HOOK-UP

1. Pull 3-phase wires and single-phase and ground wires through one of knock-out holes located on front side on foot of console. Check charts in Figure 4-4 and Figure 4-5 for correct wire size.



Grounding wire (green) must be at least as large in diameter as largest wire used for AC power connections.

WARNING

2. Connect 3-phase wires to Terminal Board TB2-L1, TB2-L2, and TB2-L3.
3. Connect single-phase wires to TB2-L1, Neutral, marked 115V single-phase. Connect ground wire to TB2-ground.
4. Check Schematic and/or Automation Manual for wiring hook-up to TB5. These connections are for projector, sound, changeover douser, and auditorium functions.
5. Hook up all wires as required in above instructions.

| AC Wiring Hook-Ups | | | | | |
|---------------------------|---|--------|--------|--------|--------|
| AC AMPERES | WIRE DIAMETER (AWG) PER CABLE LENGTH | | | | |
| PER PHASE | 50 FT | 100 FT | 150 FT | 200 FT | 250 FT |
| 0 - 10 | 14 | 14 | 12 | 10 | 10 |
| 11 - 15 | 14 | 12 | 10 | 8 | 6 |
| 16 - 20 | 12 | 10 | 8 | 8 | 6 |
| 21 - 25 | 10 | 10 | 8 | 6 | 4 |
| 26 - 35 | 8 | 8 | 6 | 4 | 4 |
| 36 - 45 | 6 | 6 | 4 | 4 | 3 |
| 46 - 60 | 4 | 4 | 4 | 3 | 1 |
| 61 - 70 | 3 | 3 | 3 | 2 | 1 |
| 71 - 80 | 2 | 2 | 2 | 1 | 1/0 |

Figure 4-4: Minimum Wire Sizes for AC Connections

| DC Wiring Hook-Ups | | | | |
|---------------------------|---|-------|-------|--------|
| DC AMPERES | WIRE DIAMETER (AWG) PER CABLE LENGTH | | | |
| PER PHASE | 25 FT | 50 FT | 75 FT | 100 FT |
| 20 | 10 | 10 | 8 | 6 |
| 40 | 10 | 8 | 6 | 4 |
| 60 | 8 | 6 | 4 | 2 |
| 80 | 4 | 4 | 2 | 1 |
| 100 | 4 | 3 | 1 | 1/0 |
| 125 | 3 | 1 | 1/0 | 2/0 |
| 150 | 3 | 1 | 2/0 | 3/0 |
| 200 | 2 | 1/0 | 3/0 | 4/0 |

Figure 4-5: Minimum Wire Sizes for DC Connections



All panels must be secured in place, and all doors must be closed and locked, before operating console.

WARNING

5. ALIGNMENT AND CHECKOUT PROCEDURES

5.1. MECHANICAL ALIGNMENT



When installing an SLC console equipped for 35/70 mm operation, be certain that the optical bench assembly is in the correct sliding position: FORWARD for 70 mm, to the REAR for 35 mm. Contact Christie for more information or for assistance.

All SLC Consoles are optically aligned at the factory. The optical bench or plenum assembly is aligned with an optical laser alignment tool. At installation, if not already mounted, the projector must subsequently be mechanically aligned to the console snood. This is done by adjusting the jackscrews on the projector mounting bracket (Up/Down, Left/Right). (See Item 14 in Figure A-2.)

A satisfactory mechanical alignment can readily be obtained without the use of any special tools.

5.2. INSTALLATION OF XENON LAMP



Authorized protective clothing must be worn when protective cover is removed from lamp.

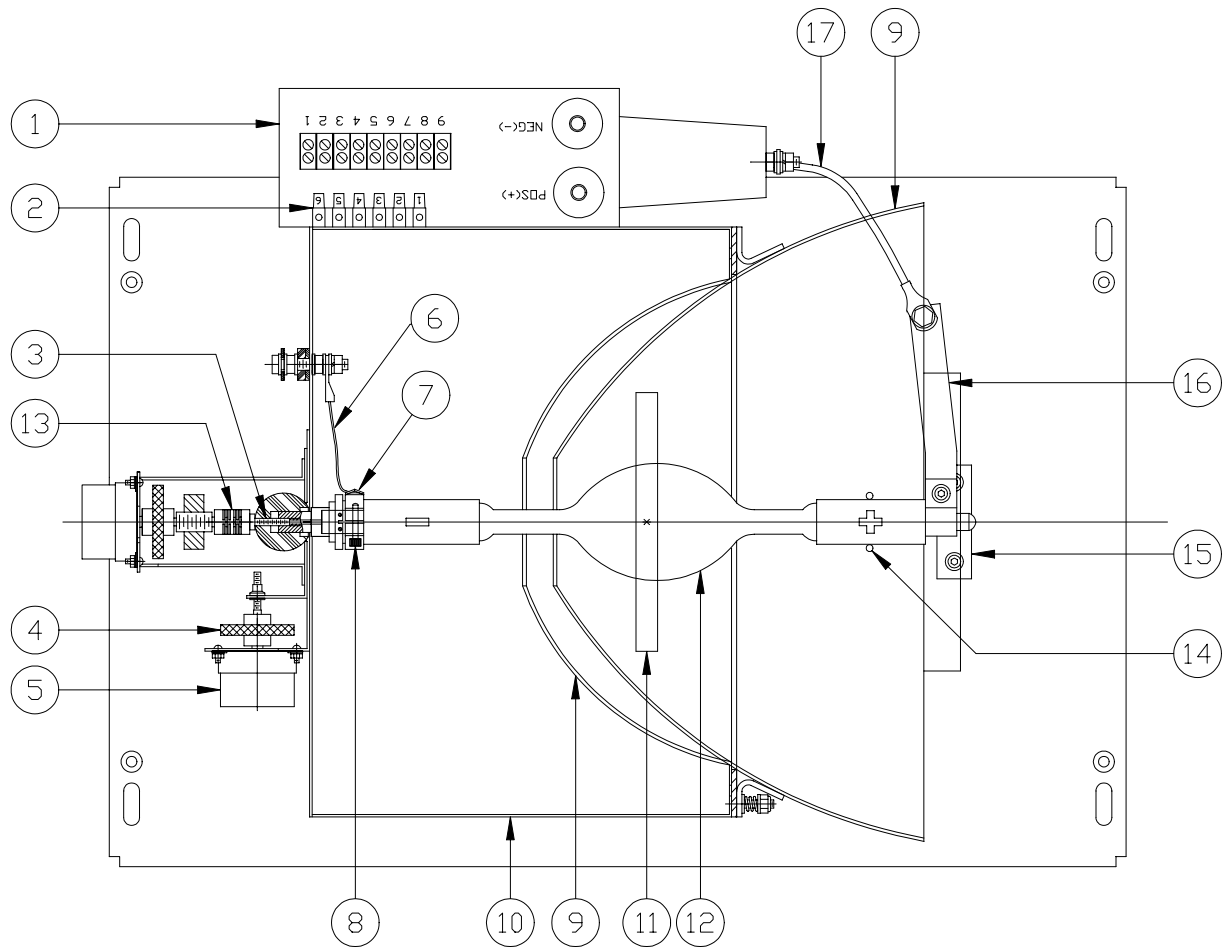
WARNING

1. Turn off all AC power.
2. Open top door on the operating (right) side of console.
3. Remove plenum access cover.
4. Verify that lamp model number and rating correspond to the rating on the console nameplate or lamp rating sticker.
5. Remove lamp from package.



Do not touch the quartz body of the lamp with bare hands at any time. Do not apply any bending or twisting force to the quartz body of the lamp.

WARNING



| | |
|--|---|
| <p>1: Igniter, IGA-10 (116715-001) Igniter, IGA-15M (117124-001)</p> <p>2: Terminal Board, TB4 (586210-602)</p> <p>3: Focus Screw (195182-001)</p> <p>4: Wheel, Manual Lamp Adjustment (195190-001)</p> <p>5: Motor, Synchronous, Lamp Adjustment, 50 RPM (582000-002)</p> <p>6: Flex Braid Negative Lamp Lead (SLC) (195224-002)</p> <p>7: Negative Lamp Connector (194513-003)</p> <p>8: Allen Screw, #8-32 x 0.75 in L (598931-046)</p> <p>9: Reflector, 2000-3000 W Lamp (SLC 20, 30) (195206-003) Reflector, 4500 W (SLC 45R) (195710-001) Reflector, 4000 W (SLC 40, 45) (195891-001) Reflector, 7000 W (SLC 70) (195572-002)</p> <p>10: Cover Support, Plenum (195171P001) Cover Front Support, Plenum (195172P001)</p> | <p>11: Magnet, Arc Stabilizer (515000-092)</p> <p>12: Xenon Lamp, 1600 W Adapter (CXL-16S) * Xenon Lamp, 2000 W (CXL-20) * Xenon Lamp, 3000 W (CXL-30) * Xenon Lamp, 4000 W (CXL-40) * Xenon Lamp, 4500 W (CXL-45) * Xenon Lamp, 6000 W (CXL-60) * Xenon Lamp, 7000 W (CXL-70) *</p> <p>13: Shaft Coupling (195532-001)</p> <p>14: Lamp Support Arm (193959-001)</p> <p>15: Insulator, Forward Lamp Support (193958-002)</p> <p>16: Forward Adapter, Positive Connector (191925P001)</p> <p>17: Lamp Lead, Positive Connector (SLC 20, 30, 40, 45, 70) (195224-002)</p> <p>* Specify SLC model when ordering.</p> |
|--|---|

Figure 5-1: Plenum, Top View

6. Remove knurled nut and locking star washer (if present) from negative (cathode) base pin of lamp.
7. Remove protective cover from lamp.
8. Insert threaded cathode end of lamp into negative lamp connector located in rear of plenum. (See Item 7 in Figure A-6.)
9. Screw lamp in place until it bottoms out in lamp connector.
10. Rest positive (anode) end on forward wire cradle.
11. Install positive lamp connector. (See Figure 5-1.)
12. Tighten clamping screws in positive and negative lamp connectors. (See Items 7 and 17, Figure 5-1).



Proper electrical contact is essential in order to prevent resistance in the positive and negative lamp connectors.

13. Verify that positive lead from lamp to igniter does not touch or run close to any metal parts of lamphouse or mirror.



Leads that are too close to any metal parts will cause arcing during starting pulse, and lamp may not ignite.

14. If quartz body of lamp is accidentally touched with bare hands or becomes dirty, clean quartz body of lamp with alcohol and carefully wipe with soft cloth and distilled water.



Authorized protective clothing must be worn when cleaning lamp.

WARNING

15. Replace plenum cover plate and close operating door.



Interlock switches prevent the system from operating if the top door on the operator side and the door on the non-operating side are not closed and locked.

6. OPERATING THE SLC

6.1. SAFETY REVIEW



Do not install, operate, maintain, or repair the SLC Xenon Lamp Console unless you have read Section 2, are familiar with the safety precautions, and have followed all warnings and instructions.

WARNING

- **Never look directly at the Xenon lamp.**
Serious and permanent eye damage can be caused by the ultraviolet radiation of the lamp. Under no condition should the console be opened except as described in Section 7, below.
- **Do not open the lamp compartment for at least ten minutes after switching the lamp off.**
- **Always wear authorized protective clothing when opening the lamp compartment or handling an unprotected lamp.**
- **Turn off the breaker at the building AC power distribution panel before entering the console.**

6.2. STARTING AND OPERATING THE SLC

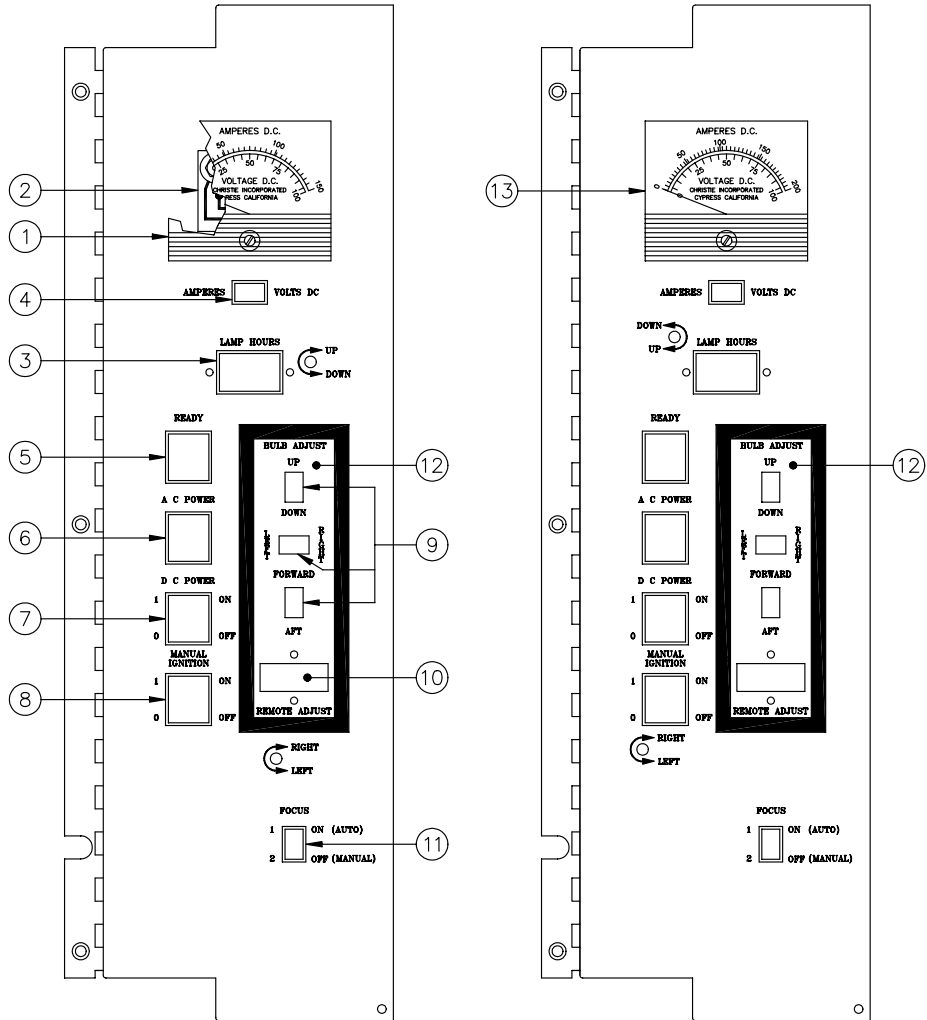
Before starting the lamp, check the rated lamp operating current. The rated lamp operating current is found on the lamp data sheet in the box in which the lamp is shipped.

1. Verify that DC Power ON/OFF Switch (Item 7 in Figure 6-1) is in OFF position.
2. Energize all AC power to console. Pilot lamp (Item 6 in Figure 6-1) will light.



The power supply should not energize until the DC Power ON/OFF Switch is switched ON.

3. Set current adjust on power supply (Item 6 in Figure 4-1) to medium position.
4. Verify that lamphouse cooling is operating. Interlock ready light (Item 5 in Figure 6-1) should be ON, indicating that interlock circuit is closed.

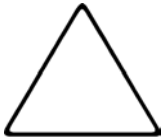


SLC 20, 30

SLC 40, 45, 70

| | |
|--|---|
| <p>1: Meter, 150 Amp (535112-321) 2: Volt/Ampere PCB (195643-0010) 3: Timer, 120 VAC, 60 Hz (581399-008) Timer, ET, 120 VAC, 60 Hz (581399-015) Timer, ET, 120 VAC, 50 Hz (581399-016) Timer, ET, 240 VAC, 60 Hz (581399-017) 4: Rocker Switch, SPDT (578712-002) 5: Indicator, Green, 120 VAC (195138-001) Indicator, Green, 250 VAC (546700-054) 6: Indicator, Amber, 380 VAC (195139-001) Indicator, Amber, 440 VAC (195139-002) Indicator, Amber, White Base (546700-038)</p> | <p>7: Rocker Switch, DPST, ON/OFF (578900-026) 8: Rocker Switch, DPST; MOM ON (578900-027) 9: Rocker Switch, SPDT; MOM (578900-040) 10: Terminal Receptacle (524310-006) 11: Rocker Switch, SPDT; ON/ON (578900-042) 12: Control Panel, Manual (195756-001) Control Panel, Motorized, Auto-Focus (195756-002) Control Panel, Motorized Manual and Auto-Focus Manual (195756-003) 13: Meter, 200 Amp (535112-317)</p> |
|--|---|

Figure 6-1: Control Panel



If the light is not on when the pilot lamp (Item 5 in Figure 6-1) is on, check for an open switch (door switch, blower switch, or exhaust stack switch) in the interlock circuit.

5. If Automation Control is not used, set DC Power ON/OFF switch to ON position.
If Automation Control (automatic remote control) is used, leave AC ON/OFF switch in OFF position. Lamp operation is controlled by automation relay. If this relay malfunctions, the lamp can be ignited by setting DC Power ON/OFF Switch to ON.
6. Verify that douser handle (Item 15 in Figure 4-1) is closed (in UP position).
7. Turn DC Power ON/OFF Switch to ON position. Lamp will ignite automatically. If lamp does not ignite, momentarily press the Manual Start Button (Item 8 in Figure A-1) to strike lamp.
8. Check ammeter reading and verify that rated lamp current is not exceeded.



Do not allow the current to exceed the rated maximum lamp current or be any lower than 10% of that value.

WARNING

9. If current is too high or too low, use tap switch to adjust power supply to proper current. If, after ten-minute warm-up period, correct current cannot be obtained with tap switch:
 - a) Turn unit off.
 - b) Turn off AC at the building panel.
 - c) Open left side door of console.
 - d) Change Hi-Lo links (see Item 6 in Figure 2-1) as necessary.



Turn the DC Power ON/OFF Switch to OFF before rotating the tap switch.

WARNING

10. Extinguish lamp by turning DC Power ON/OFF switch to OFF position.



Do not service the power supply until it has been turned off for at least two (2) minutes. This allows the capacitors to discharge.

WARNING

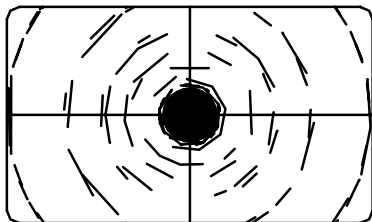
6.3. OPTICAL ALIGNMENT AND ADJUSTMENT

Repeat this procedure every time a lamp is changed. (See illustrations in Figure 6-2.)

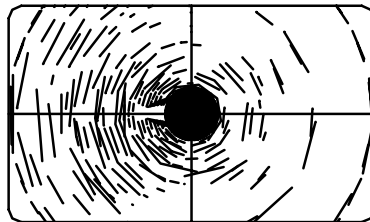
1. After lamp has been started and operated as described in Section 6.2, open douser. Observe dark spot projected on screen.
2. Using control panel (Figure 6-1), adjust lamp focus until dark spot is clearly defined.
3. Center dark spot using vertical and lateral adjustments (Item 9 in Figure 6-1).
4. Move lamp forward. Light intensity should be equal on both sides of dark spot. If light intensity is not equal on both sides of dark spot, use vertical and/or lateral adjustments to balance light intensity.
5. When light intensity is balanced, move lamp back through FOCUS. Light intensity should again be equal on both sides of dark spot.

If light intensity is not equal on both sides of dark spot, recheck Section 5.1 (Mechanical Alignment) and repeat Steps 1 – 5.

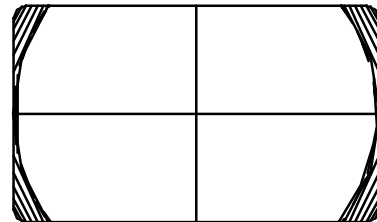
6. Close the douser and replace the projector lens in the projector.
7. Again open the douser and make final lamp adjustments, if necessary, to obtain maximum and uniform light on the screen.



Correct picture without projector lens installed.



Lamp centering too far to left; correct with Left/Right lamp adjustment.



Correctly centered bright spot with scope lens and aperture plate.

Figure 6-2: Optical Alignment of Xenon Lamp

6.4. TILT ADJUSTMENT

The SLC Console is optionally equipped with a jackscrew for easy tilt adjustment. It is located in the bottom rear of the console, and is accessible from either side. (See Item 16 in Figure 4-2.)

1. Loosen all four (4) hold-down bolts. (See Item 7 in Figure 4-1.)
2. Turn jackscrew using 3/4-inch wrench or ratchet. Turn jackscrew clockwise to tilt console downward. Turn jackscrew counterclockwise to tilt console upward.
3. After reaching correct tilt angle, securely tighten all four hold-down bolts.

6.5. REPLACING THE LAMP

In accordance with safety precautions, always be certain that the lamp has cooled for at least 10 minutes before replacing it.



Authorized protective clothing must be worn when replacing lamp.

WARNING

6.5.1. REMOVING THE LAMP

Christie recommends that lamps be replaced before running time exceeds 120% of warranted lifetime. Check running time using elapsed time indicator on control panel (Item 3 in Figure 6-1).

1. Loosen set screws on positive and negative lamp connectors.
2. Unscrew lamp and remove from reflector. **Immediately** put protective cover on lamp.
3. Record hours that lamp has been used.



Record the elapsed time reading for the old lamp when installing a new lamp.

6.5.2. INSTALLING A NEW LAMP

Install the new Xenon lamp according to the directions in Section 5.2.

6.5.3. DEFECTIVE LAMPS

Defective lamps under warranty are to be returned to the dealer who provided the lamp in their protective cover and proper packing. They must be returned to Christie. The Warranty Claim Forms supplied with the lamp must be filled out completely. All portions of the failed lamp including electrodes must accompany the lamp to aid Christie in evaluating the defect.

7. MAINTENANCE AND ADJUSTMENTS



WARNING

Wear protective clothing when protective cover is removed from lamp.

7.1. BEFORE OPENING THE CONSOLE

Perform these checks at least every 60 days or 500 hours.



WARNING

Turn off the breaker at the building AC power distribution panel before entering the console.

1. Check contact surfaces of positive (anode) and negative (cathode) connections for cleanliness at regular intervals. Clean electrical contact surfaces as necessary to prevent contact resistance from scorching connectors.
2. Clean air intake openings.
3. Verify that all electrical and lamp connections are tight.

7.2. CLEANING OPTICAL SURFACES



Repeated cleaning of optical surfaces can be more harmful than helpful. Clean only when surfaces are excessively dirty.

The exposed optical surfaces of the lamphouse occasionally require cleaning. For optimum system performance, inspect mirror surface for cleanliness every two weeks.



Always remove the lamp before cleaning the reflector.

WARNING

7.2.1. CLEANING DUST

For surfaces that are dusty but do not have smudges, fingerprints, or grease marks:

1. Brush dust from surface with camel-hair brush.
2. Blow remaining dust away with compressed air.

7.2.2. CLEANING GREASE

For surfaces that are smudged or have oil or grease smears:

1. Moisten cotton pad with light detergent solution. Pad should be well moistened but not dripping wet.
2. Gently swab exposed lens or mirror surface, using spiral motion and working from center outward toward edge of surface.
3. Sponge up moisture with cheesecloth or lens tissue.



Always sponge with fresh cheesecloth or lens tissue. Do not wipe with material that has been used before. Throw cheesecloth or lens tissue away after one use.

4. Dampen cotton pad with methyl alcohol. Wipe surface, using spiral motion from center to edge, in one continuous motion.
5. Dry exposed surface with dry cotton pad or with lens tissue.
6. Repeat procedure above as required.
7. When exposed lens or mirror surface is dry and clean, loosen any remaining lint with brush and blow clean with compressed air.

7.3. MAINTAINING OTHER SURFACES

Surfaces other than the optical surfaces require periodic maintenance to keep the lamphouse in good operating condition. These items are:

- Blower
- Igniter
- Air flow interlocks.

These items should be cleaned approximately every six months under normal environmental conditions. Equipment in very dusty or otherwise contaminated areas may require more frequent maintenance.

7.3.1. BLOWER

The blower impeller and motor should be cleaned to prevent build-up of contaminant on both the blower impeller surfaces and on the blower motor. Proper operation of the lamp is dependent on providing adequate cooling air flow. A dirty blower may not provide proper air flow, causing the lamp and lamphouse to operate at temperatures that are higher than intended.

1. Clean loose dirt from blower impeller with vacuum cleaner.
2. Use brush with hot water and suitable detergent to remove dirt that cannot be vacuumed off.



When cleaning the impeller, be careful not to bend the blades or to loosen the balancing weights.

3. Every six months, lubricate blower motor by applying three to four drops of light machine oil to oil holes in motor housing.

7.3.2. IGNITER

Periodically clean the high voltage terminal and insulator to prevent accumulation of dust or dirt.

7.3.3. AIR FLOW INTERLOCKS

Periodically check and, if necessary, clean the air flow interlock vanes to remove accumulated dirt.

7.4. ALIGNING LAMPHOUSE WITHOUT ALIGNMENT TOOLS

1. Inspect reflector and lens and clean if necessary.
2. Inspect lamp for dirt or fingerprints. Clean if required.
3. Center lamp adjustments in rear of lamphouse to midpoint of their range.
4. Install lamp in lamphouse.
5. Use ruler to verify that positive end of lamp is centered in reflector from top to bottom and side to side. If not centered, adjust to center position by adjusting the front lamp support.
6. For best results: With ruler, verify that positive end of lamp is centered left to right in reflector within $\frac{1}{16}$ in. If not centered, adjust front lamp support to center lamp.



The following adjustments must be made with the rear lamp adjustments centered.

7. When all preliminary adjustments are satisfactory, connect positive connector to anode ferrule. To prevent arcing, keep anode lead clear of any metal parts.
8. With anode centered, firmly tighten anode and cathode clamping screws.
9. Replace plenum cover and doors of lamphouse.
10. Set current control to lowest tap and start lamphouse.
11. Install scope lens and aperture.
12. Put light on screen and adjust lamp focus for maximum light.
13. Move console base sideways and adjust tilt until aperture is centered on screen.
14. Remove projector lens and adjust lamp "left and right." If bright dot does not pass through center of dark shadow, adjust lamp "up and down" until it does. (See Figure 6-2.)
15. Adjust bright dot until it is centered behind dark shadow. (See Figure 6-2.)
16. Replace scope lens.
17. Adjust lamp focus until large bright spot with dark corners appears on screen. (See Figure 6-2: Optical Alignment of Xenon Lamp). Spot must be centered and four corners must be equal size. If spot is not centered, move projector left or right and up or down, with respect to console, until spot is centered. Do not reposition lamp.
18. Repeat steps 14 through 17 until bright spot fills all four corners at same time lamp focus control is adjusted. Barely fill corners with light and then stop. This is point of maximum light.
19. Adjust current tap switch on rectifier for desired amount of light within current rating of lamp.

7.5. XENON LAMP AUTOFOCUS ADJUSTMENTS (OPTION ABF)

The lamp autofocus is designed to give optimum light output in both scope and flat formats. After proper settings have been established, the motorized lamp adjustment automatically readjusts the lamp to its designated position. These adjustments are obtained by setting the two limit switches (Items 15 and 16 in Figure A-1) to their proper positions.

7.5.1. AUTOFOCUS ADJUSTMENT PROCEDURES

1. Connect signal wires.

24 VDC

Connect two signal wires (Scope/Flat) from automation programmer to TB6-1 and TB6-2. (See Item 25 in Figure A-1.) Set switch S13 to DC mode. Provide 24 VDC pulse (+/-) to activate latching relay for scope/flat format.

115 VAC

Connect three signal wires (Scope/Flat) from automation programmer to TB6-1, TB6-2, and TB6-3. (See Item 25 in Figure A-1.) Set switch S13 to AC mode. Provide 115 VAC to TB6-1 or TB6-4 to activate latching relay for scope/flat format.

2. Turn autofocus switch (Item 11 in Figure 6-1) to ON (1).
3. Activate automation programmer for flat position. Observe that lamp focus adjustment moves lamp forward. If the lamp adjustment moves in reverse:

24 VDC

Exchange the position of the two wires.

115 VAC

Exchange the position of the two wires of TB6-1 and TB6-3.

After correct travel has been obtained, proceed to next step.

4. Turn Autofocus switch to OFF (0).
5. Obtain desired light level on screen for flat format by adjusting up/down, left/right, and forward/aft switches (Items 9 in Figure 6-1).
6. Adjust flat adjustment thumbscrew (Item 18A in Figure A-1): If green light (Item 26 in Figure A-1) is ON, turn thumbscrew counterclockwise until light goes out. If green light is not ON, turn thumbscrew clockwise until green light comes ON. Turn thumbscrew back and forth several times to determine exact position where green light turns ON. This position is correct setting for flat format.
7. Activate automation for scope format. Set desired light level on screen for scope format by adjusting up/down, left/right, and forward/aft switches (Items 9 in Figure 6-1).
8. Adjust scope adjustment thumbscrew (Item 18B in Figure A-1): If red light (Item 27 in Figure A-1) is ON, turn thumbscrew clockwise until light goes out. If red light is not ON, turn thumbscrew counterclockwise until red light comes on. Turn thumbscrew back and forth several times to determine exact position where red light turns ON. This position is correct setting for scope format.
9. Turn autofocus switch to ON (1).
10. Activate automation several times between scope and flat formats to verify that autofocus adjustment moves to scope and flat settings as required.
11. Verify that light levels on screen stay at maximum or desired level for both scope and flat formats.



The lamp autofocus operates only when the autofocus switch is in the ON position. Manual lamp adjustment is possible only when the autofocus switch is in the OFF position. All autofocus adjustments must be made with the autofocus switch in the OFF position. The red and green lights do not light when the Autofocus switch is in the ON position.

7.6. OPTIMIZER REFLECTOR

The SLC OPTIMIZER reflector is designed to give maximum performance (light output) when the Xenon lamp has reached the optimum operating temperature for arc size and stability (two to three minutes). Ensure that the DC current setting to the lamp is correct and the lamp temperature has stabilized before making final autofocus adjustment.



Do not allow the current to exceed the rated maximum lamp current or be below 10% of that value.

WARNING

7.7. ELECTRICAL CONNECTIONS

It is very important that all electrical connections are mechanically secure or tight. The DC connections are especially important due to their relatively high current and low voltage. A loose lamp connection causes overheating of the lamp and premature failure. A periodic inspection should be made regularly, at least every 60 days.

7.8. AIRFLOW

Proper airflow for cooling the Xenon lamp is very important to sustain lamp life. Clean blower wheels and oil blower motors at least every six months as described in Section 7.3.1. Be careful not to disturb or remove the balance weights on the blower wheel while cleaning.

7.9. REMOTE LAMP ADJUSTMENT CONTROL (OPTION RBA)

The remote lamp adjustment control unit is equipped with a six-foot umbilical cord. This cord enables the operator to stand at the viewport while operating the lamp adjustments to attain maximum screen illumination. The RBA is a plug-in unit, and can be moved between SLC lamphouses.



The lamp autofocus switch must be in the OFF position to operate the remote lamp adjustment unit.

8. TROUBLESHOOTING

This section helps the user to identify and, where possible, correct system malfunctions in SLC Xenon Consoles. The sections below are organized by malfunction type. For each malfunction, the manual lists symptoms associated with possible problems, and then presents a table containing probable causes and steps to be taken to correct the problem.

Christie suggests that, when following these troubleshooting procedures to correct a problem, users:

1. Copy the appropriate tables
2. Record observations in the rightmost column
3. Include annotated copies with maintenance and repair records for future reference.

8.1. MALFUNCTION: POWER SUPPLY DOES NOT START

The system does not power up.

| | Probable Cause | Corrective Action | Date/Remarks |
|---|---|---|--------------|
| A | No AC (3-phase) voltage at TB2. | Check disconnect switch or circuit breaker at AC distribution panel. | |
| B | Phase voltages are not equal at TB2. | Measure TB2-L1, L2, and L3 for missing or low voltage; correct loose or damaged wire. | |
| C | Ready lamp is not on, interlock or blower switches not functioning. | Check that all switches are closing properly. Continuity each switch if necessary. | |

Table 8-1: Troubleshooting for Power Supply Does Not Start

8.2. MALFUNCTION: LAMP DOES NOT IGNITE

The system powers up, but the lamp does not ignite.

| | Probable Cause | Corrective Action | Date/Remarks |
|---|---------------------------------------|--|--------------|
| A | Ready lamp is not on. | Check all interlock or blower switch circuits. | |
| B | DC supply is not set to proper value. | Increase lamp current by adjusting power supply tap switch. | |
| C | Failed power supply. | With DC power switch ON (open circuit), measure across igniter (+) and (-) positions for 85VDC minimum. If minimum voltage is not present, check power supply output. | |
| D | Failed igniter | Listen for igniter buzz when manual start button is pushed. If buzz is heard, replace spark gap or AC transformer in igniter. | |
| E | Igniter relay has failed. | Listen for relay to pull in as start button is pushed. If relay does not activate, measure coil voltage and/or check relay circuit. If no output voltage, replace defective relay. | |
| F | Lamp failed. | Inspect lamp and replace. | |

Table 8-2: Troubleshooting for Lamp Does Not Ignite

8.3. POWER SUPPLY OUTPUT IS LOW OR NOT STEADY

Power is erratic.

| | Probable Cause | Corrective Action | Date/Remarks |
|---|-------------------------------------|--|--------------|
| A | One phase open or low at TB2 or TB1 | Inspect all DC and AC connections. Measure voltages at TB2-L1, TB2-L2, and TB2-L3, then at TB1-HI/LO links. Check AC source or repair circuit. | |
| B | Failed diode | With power supply OFF, check for open or short in diodes. Use ohmmeter and reverse leads. If both measurements are below 1 Ω , diode is shorted. If above 10 k Ω , diode is open. Replace diode. | |

Table 8-3: Troubleshooting for Power Supply Output Low or Not Steady

WARRANTY

COVERING THEATRE PRODUCTS MANUFACTURED BY

CHRISTIE DIGITAL SYSTEMS

(herein referred to as "Christie")

Christie warrants the apparatus sold to the extent of the parts necessary to correct any defect in workmanship or materials which may develop under proper or normal use for a period of one (1) full year (*90 days on electric motors*) from date of installation (*except as noted below*), but not to exceed eighteen (18) months from date of shipment from Christie. Christie reserves the right to have the apparatus returned, freight prepaid, to the Christie factory to effect the warranty repairs.

Replacement parts for warranty repairs will be shipped promptly by Christie, FOB factory, and invoiced to the customer. Credit will be issued upon return of the defective part or parts, prepaid, to the Christie factory. Note: In the event that returned parts are found to continue to meet Christie specifications, no credit will be issued.

The above shall constitute a fulfillment of all Christie liabilities in respect to said apparatus.

This warranty does not cover the following items:

Special customer specified purchased parts or materials; also, Xenon, mercury, and other types of lamps (*lamps*).

Christie shall not be liable for any consequential damages except:

Christie will replace standard Christie reflector under warranty in lamphouse damaged by failure of Christie Xenon lamp during its warranted life and if properly operated, under the following terms and conditions:

- A. If the original reflector installed is *less than one year old*, full credit will be issued.
- B. If the original reflector is *more than two years, but less than three years old*, *one-quarter credit* will be issued.
- C. After *three years* from date of original installation, *no credit* will be issued.

Appendix A

Appendix A: Assembly Diagrams and Parts Lists

Appendix A contains diagrams and parts lists for these major components of the SLC Xenon Lamp Console:

1. Autofocus Adjustment Assembly
2. SLC Console (Front View)
3. SLC Console (Rear View)
4. Control Panel
5. Manual Lamp Adjustment Assembly
6. Plenum (Top View)
7. Power Supply.

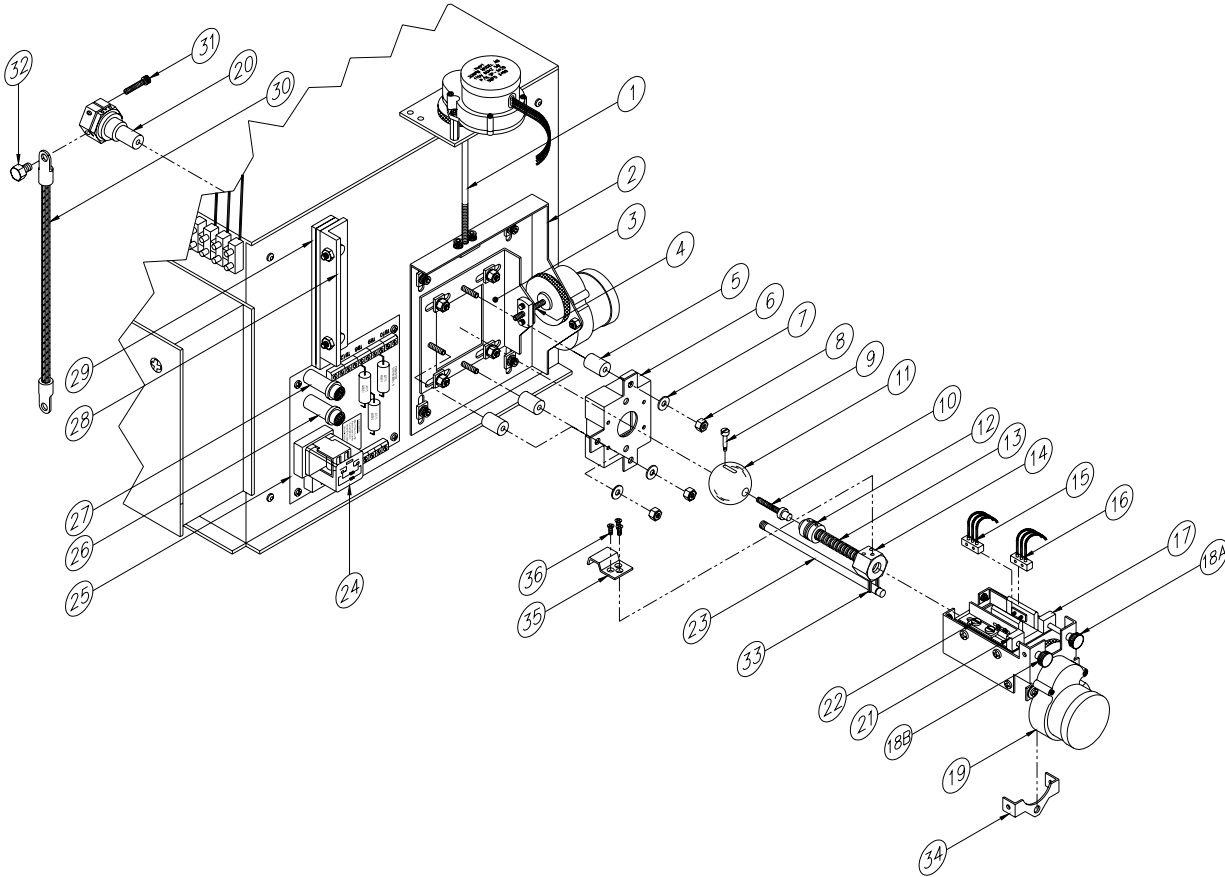


Figure A-1: Autofocus Assembly

| # | Description | Part Number |
|----|--|-------------|
| 1 | Lamp Adjustment Screw, Long | 195145-001 |
| 2 | Plate, Vertical Adjustment | 195758-001 |
| 3 | Plate, Horizontal Adjustment | 195753-001 |
| 4 | Lamp Adjustment Screw, Short | 195145-002 |
| 5 | Spacer, 0.171 in ID x 0.4375 in OD | 598931-825 |
| 6 | Box, Horizontal Adjustment | 195752-001 |
| 7 | Washer, Flat, #8 | 515819-303 |
| 8 | ESNA Nut, 8-32, Nylon Steel | -- |
| 9 | Screw, Shoulder 4-40 x 0.5 in L | 598931-619 |
| 10 | Adjustment Screw, Lamp Rear Adjustment | 195182-001 |
| 11 | Pivot Ball | 194512-002 |
| 12 | Helical Coupling, 6.0 mm ID | 195532-001 |
| 13 | Screw-Switch, Adjustment | 195331-001 |
| 14 | Nut-Switch, Adjustment | 195329-001 |
| 15 | Switch, Limit Assembly | 578000-073 |
| 16 | Switch, Limit Assembly | 578000-073 |
| 17 | Switch Mounting Plate, (Left) | 195759-002 |
| 18 | Switch Adjustment Screw, 8-32 x 2.0 in L | -- |
| | Switch Adjustment Knob | 598931-526 |
| 19 | Motor, Synchronous Reversible | 582000-002 |
| 20 | Rear Adapter Lamp | 194513-003 |
| 21 | Switch Mounting Plate, (Right) | 195759-001 |
| 22 | Screw, Shoulder, Slotted | 195346-001 |
| 23 | Pivot Switch Adjustment | 195298-001 |
| 24 | Relay, Magnetic Latch, 120 VAC, 10 Amp | 571210-003 |
| | Relay, Magnetic Latch, 24 VDC, 10 Amp | 571210-004 |
| 25 | PCB Assy, Lamp Adjustment (Auto Motor.) | 195315-001 |
| | PCB Assy, Lamp Adjustment (Motorized) | 195315-002 |
| 26 | Indicator Lamp, Green | 546700-034 |
| 27 | Indicator Lamp, Red | 546700-025 |
| 28 | Shunt, 200 Amp (<i>SLC 45R, 70</i>) | 111786-001 |
| | Shunt, 150 Amp (<i>SLC 20, 30, 40</i>) | 113460-001 |
| 29 | Insulator, Shunt; 0.1875 in Thk | 195243-001 |
| | Insulator, Shunt; 0.125 in Thk | 195243-002 |
| 30 | Flex Braid Negative Lamp Lead (<i>CXC</i>) | 195224-002 |
| 31 | Screw, Socket Head Cap, 8-32 x 0.750 in L | 598931-046 |
| 32 | Screw, Hex Head, 1/4-20 x 0.375 in, Steel | -- |
| 33 | Roll Pin 3/32 x 0.750 in L | 598931-503 |
| 34 | Bracket, Adjustment Switches | 195247-001 |
| 35 | Actuator, Switch | 195330-001 |
| 36 | Screw, Phillips Flat Head 4-40 x 1/4 in L | HS04004-04 |

Table A-1: Parts List for Autofocus Assembly

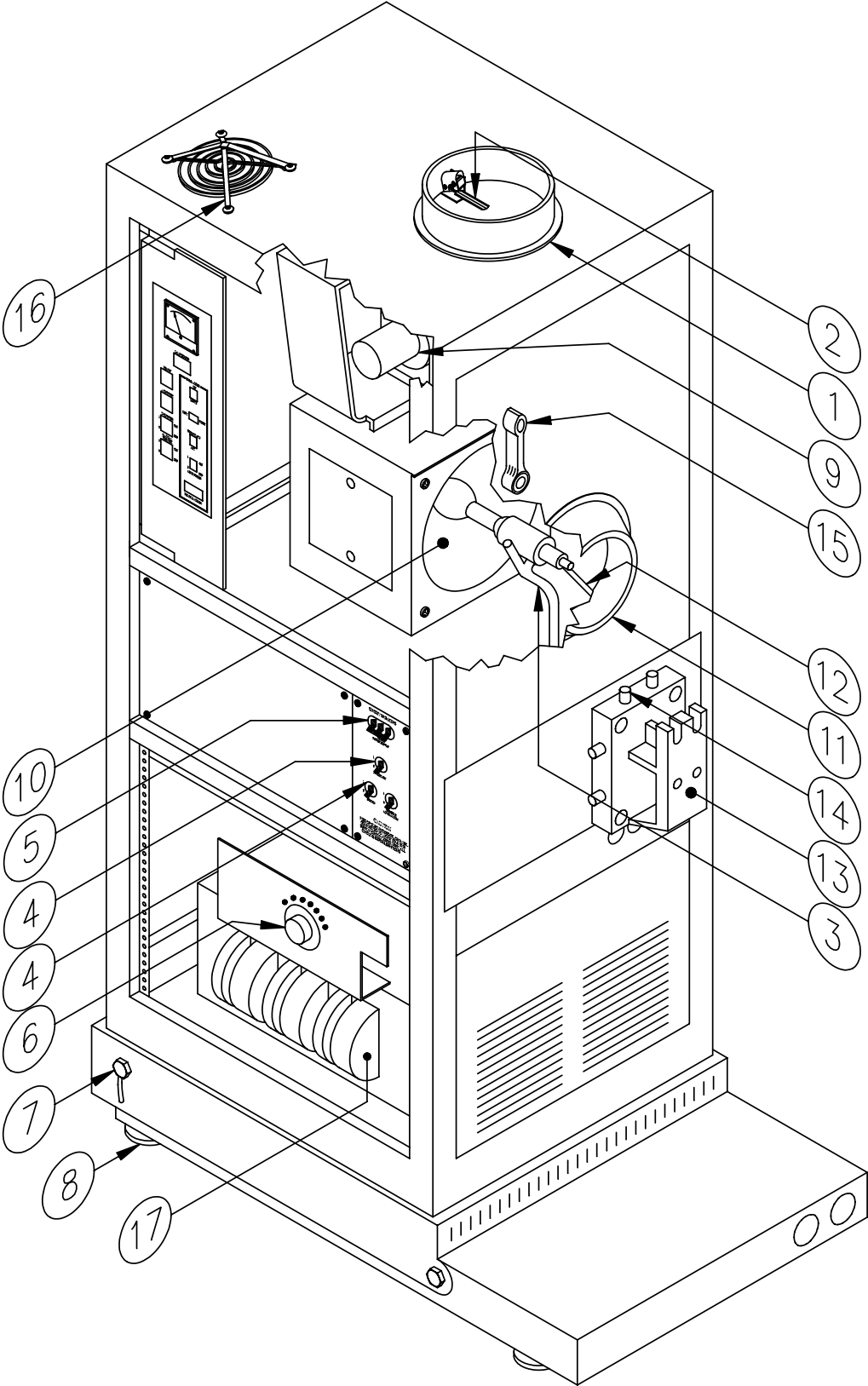


Figure A-2: SLC Xenon Lamp Console (Front View)

| # | Description | Part Number |
|----|--|-------------|
| 1 | Exhaust Duct Connector, 8.0 in | 195713-001 |
| 2 | Air Switch 1000 Assembly | 195557-002 |
| 3 | Lamp Support Arm, Positive | 193959-001 |
| 4 | Circuit Breaker, 1-Pole, 15 Amp | 573101-020 |
| | Circuit Breaker, 1-Pole, 20 Amp | 573102-009 |
| | Circuit Breaker, 1-Pole, 30 Amp | 573103-022 |
| 5 | Circuit Breaker, 3-Pole, 20 Amp | 573302-003 |
| | Circuit Breaker, 3-Pole, 30 Amp | 573303-005 |
| | Circuit Breaker, 3-Pole, 40 Amp | 573304-001 |
| 6 | Tap Switch Assembly, Lamp Current Adjustment | 111972-002 |
| 7 | Tilt Adjustment Lock Bolt (2) | 515500-177 |
| 8 | Leveling Foot (4) | 520650-003 |
| 9 | Blower (SLC 20, 30) | 598931-548 |
| | Blower (SLC 40,45, 70) | 598931-645 |
| 10 | Reflector, 2000 - 3000 W | 195206-003 |
| | Reflector, 4000, 4500 W | 195891-001 |
| | Reflector, 4500 W (Reference) | 195710-001 |
| | Reflector, 7000 W | 195572-002 |
| 11 | Snood (SLC 20, 30) | 195741-001 |
| | Snood (SLC 40,45,70)) | 195415-001 |
| 12 | Positive Lamp Connector | 191925-001 |
| 13 | Projector Bracket (SLC 20, 30) | 195303-001 |
| | Projector Bracket (SLC 40, 45, 70) | 195738-001 |
| 14 | Projector Alignment Adjustment Screw | 515500-141 |
| 15 | Douser Handle | 192121-001 |
| 16 | Guard Air Intake | 195684-001 |
| 17 | Power Supply CCX30-02, 208/230 VAC, 60 Hz | 195463-010 |
| | Power Supply CCX30-34Z, 380/415 VAC, 50 Hz | 195463-004 |
| | Power Supply CCX40-02, 208/230 VAC, 60 Hz | 195464-010 |
| | Power Supply CCX40-34Z, 380/415 VAC, 50 Hz | 195464-004 |
| | Power Supply CCX70-02, 208/230 VAC, 60 Hz | 195556-010 |
| | Power Supply CCX70-34Z, 380/415 VAC, 50 Hz | 195556-004 |
| | | |
| | | |

Table A-2: Parts List for SLC Xenon Lamp Console (Front View)

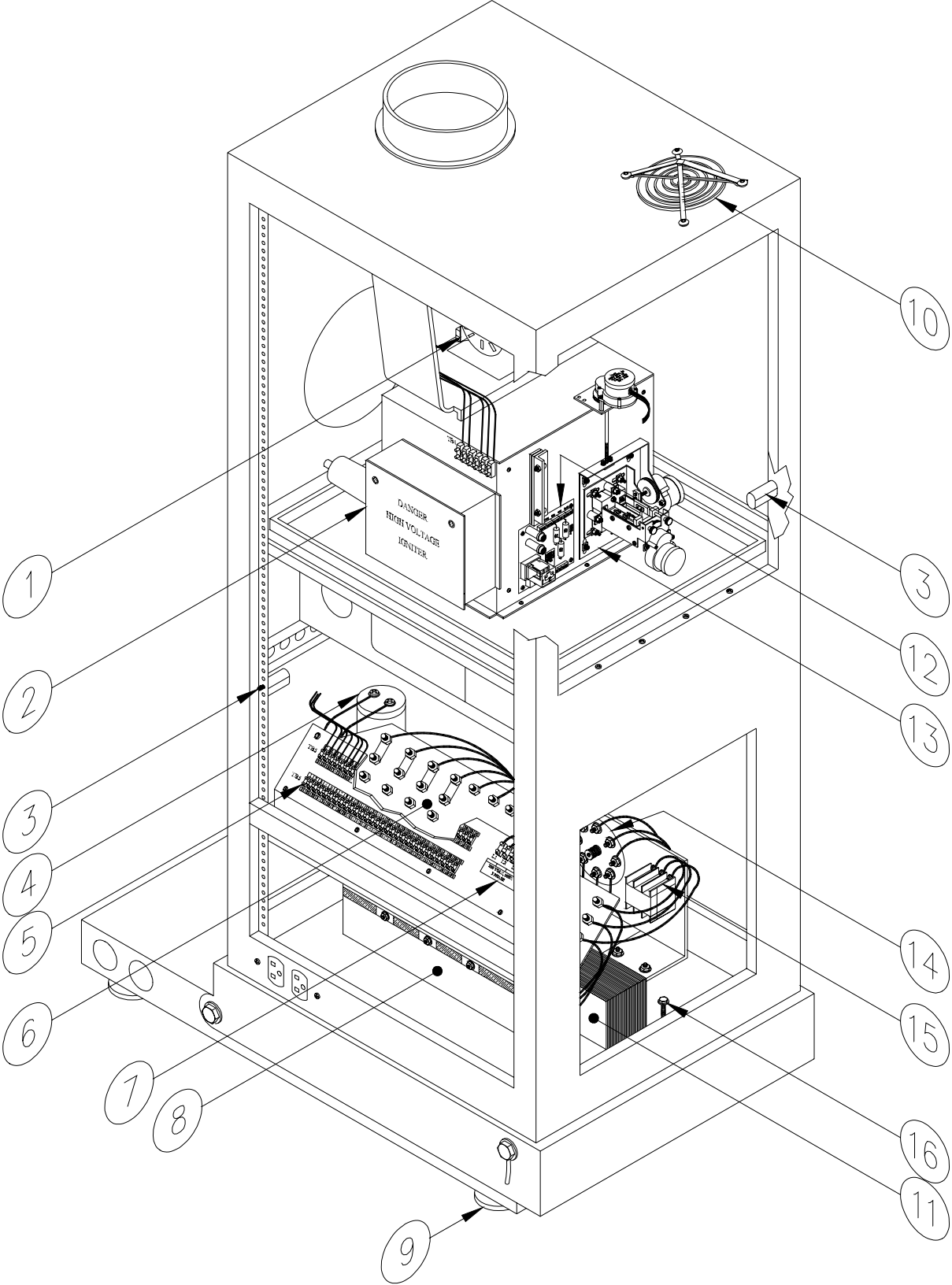


Figure A-3: SLC Xenon Lamp Console (Rear View)

| # | Description | Part Number |
|----|---|-------------|
| 1 | Air Switch 1600 Assembly | 195557-001 |
| 2 | Igniter, IGA-10 | 116715-001 |
| | Igniter, IGA-15M | 117124-001 |
| 3 | Door Interlock Switch | 578000-034 |
| 4 | Capacitor (SLC 20, 30) | 530106-302 |
| | Capacitor (SLC 40, 45, 70) | 530122-009 |
| 5 | Terminal Strip, with Wire Guard | 586211-001 |
| 6 | Control Assembly, 60 Hz (SLC 20, 30) | 114173-002 |
| | Control Assembly, 50 Hz (SLC 20) | 114173-011 |
| | Control Assembly, 50 Hz (SLC 30, 40, 45, 70) | 114173-010 |
| | Control Assembly, 60 Hz (SLC 40, 45, 70) | 114173-001 |
| 7 | Power Input Terminal, 55 Amp | 586210-601 |
| 8 | Heat Sink Assembly (SLC 20, 30) | 114109-002 |
| | Heat Sink Assembly (SLC 40, 45, 45R, 70) | 195569-001 |
| 9 | Leveling Foot (4) | 520650-003 |
| 10 | Fan Guard, 4.5 x 0.200/0.600 in DP | 598931-496 |
| 11 | Transformer, 208/230 VAC, 60 Hz (T1)(SLC20/30) | 195773-001 |
| | Transformer,380/415 VAC50/60Hz(T1)(SLC20/30) | 195773-004 |
| | Transformer, 208/230 VAC, 60 Hz (T1) (SLC 40) | 195774-001 |
| | Transformer, 380/415 VAC,50/60Hz (T1) (SLC 40) | 195774-004 |
| | Transformer,208/230 VAC,60 Hz (T1) (SLC 45/70) | 195775-001 |
| | Transformer,380/415 VAC50/60Hz(T1)(SLC45/70) | 195775-004 |
| | Transformer,208/230VAC,60Hz(T1)(SLC45R/70R) | 195775-001 |
| | Transformer, 380/415 VAC, 50/60 Hz (T1) (SLC45R/70R) | 195775-004 |
| 12 | PCB Assembly, Lamp Adjustment | 195315-001 |
| | PCB Assembly, Lamp Adjustment | 195315-002 |
| 13 | Xenon Lamp Adjustment, Manual | 195800-001 |
| | Xenon Lamp Adjustment, Motorized | 195800-002 |
| | Xenon Lamp Adjustment, Auto-Focus, Motorized | 195800-003 |
| | Xenon Lamp Adjustment, Auto-Focus, Manual | 195800-004 |
| | Xenon Lamp Adjustment, Motorized, Manual | 195800-005 |
| 14 | Tap Switch Assembly, Lamp Current Adjustment | 111972-002 |
| 15 | Contactora, Relay (SLC 20, 30), 120V | 571340-006 |
| | Contactora, Relay (SLC 40, 45, 70), 120V | 571340-008 |
| | Contactora, Relay (SLC 20, 30), 230V | 571340-007 |
| | Contactora, Relay (SLC 40, 45, 70), 230V | 571340-009 |
| 16 | Console Tilt Option | 195535-001 |

Table A-3: Parts List for SLC Xenon Lamp Console (Rear View)

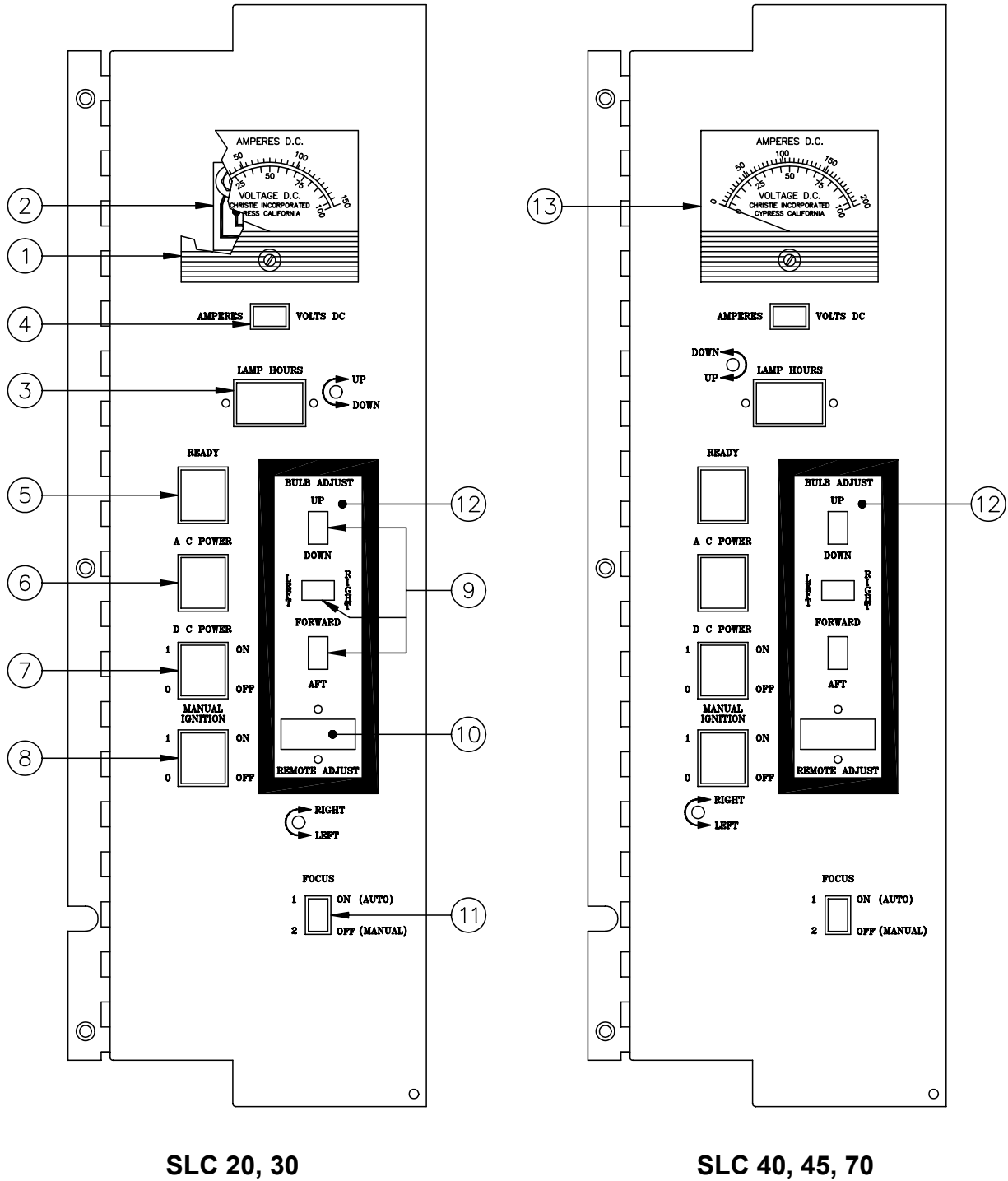


Figure A-4: Control Panel

| # | Description | Part Number |
|----|---|-------------|
| 1 | Meter, 150 Amp, 100 VAC | 535112-321 |
| 2 | Volt/Ampere PCB, Assembly | 195643-001 |
| 3 | Timer-Elect, 100 Khr, 120 VAC, 60 Hz | 581399-008 |
| | Timer-Elect, 100 Khr, ET, 120 VAC, 60 Hz | 581399-015 |
| | Timer, Electric, 100 Khr, ET, 120 VAC, 50 Hz | 581399-016 |
| | Timer, Electric, 100 Khr, ET, 240 VAC, 60 Hz | 581399-017 |
| 4 | Switch, Rocker, SPDT, ON/MOM ON | 578712-002 |
| 5 | Indicator, Green Lens, Modified, 120 VAC | 195138-001 |
| | Indicator, Green Lens, 250 VAC | 546700-054 |
| 6 | Indicator, Amber Lens, Modified, 380 VAC | 195139-001 |
| | Indicator, Amber Lens, Modified, 440 VAC | 195139-002 |
| | Indicator, Amber Lens, White Base | 546700-038 |
| 7 | Switch, Rocker, DPST ON/OFF, 125 VAC, 10 Amp | 578900-026 |
| 8 | Switch, Rocker, DPST; MOM ON, 25 VAC, 10 Amp | 578900-027 |
| 9 | Switch, Rocker, SPDT; MOM, Center OFF | 578900-040 |
| 10 | Terminal Receptacle, with Angle Brackets | 524310-006 |
| 11 | Switch, Rocker, SPDT; ON/ON, 120 VAC, 5 Amp | 578900-042 |
| 12 | Control Panel, Manual | 195756-001 |
| | Control Panel, Motorized, Auto-Focus | 195756-002 |
| | Control Panel, Motorized Manual and Auto-Focus Manual | 195756-003 |
| 13 | Meter, 200 Amp, 100 VAC | 535112-317 |

Table A-4: Parts List for Control Panel

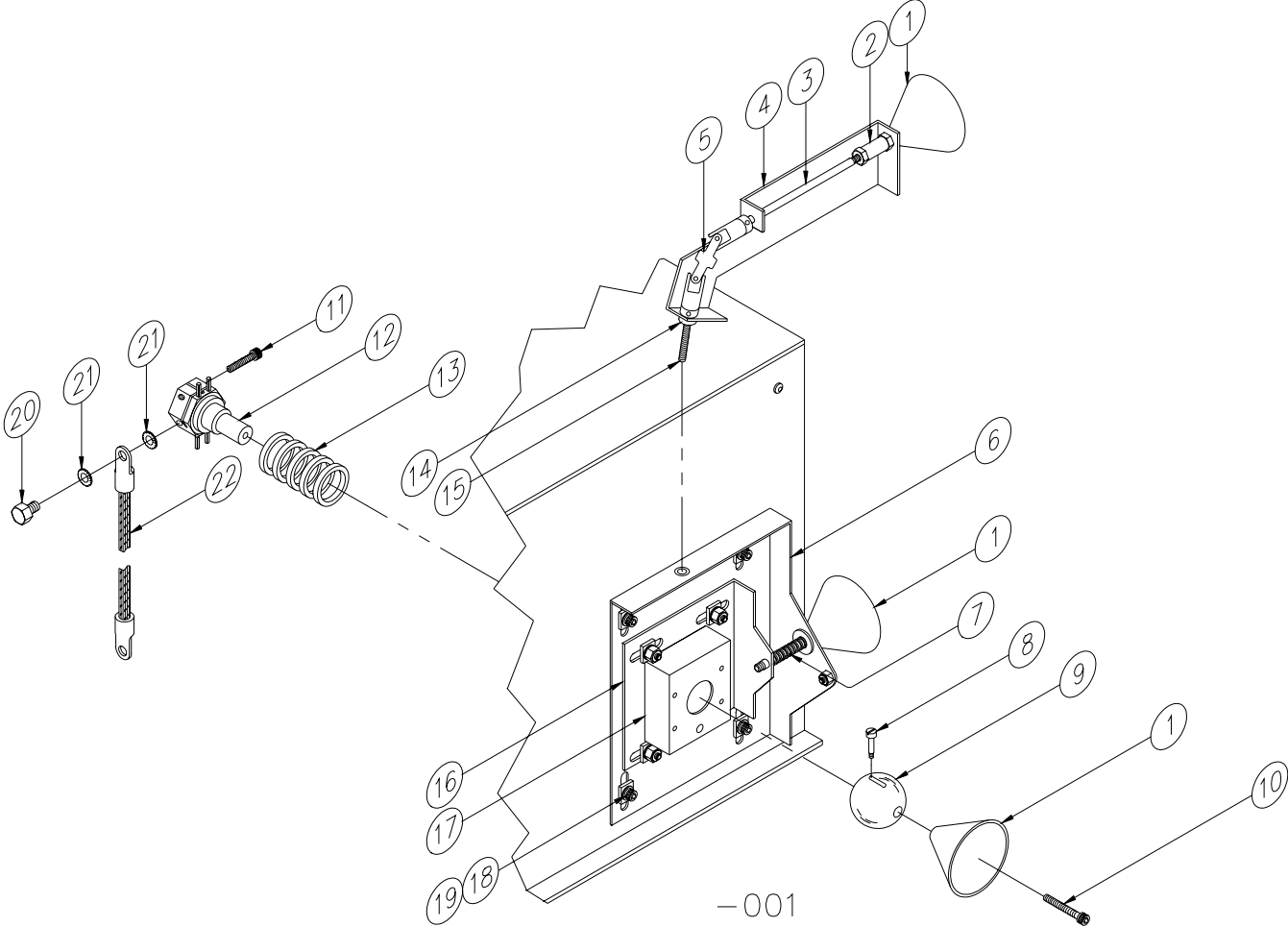


Figure A-5: Manual Lamp Adjustment Assembly

| # | Description | Part Number |
|----|--|-------------|
| 1 | Adjustment Guide | 193571-001 |
| 2 | Standoff, Female | 598931-523 |
| 3 | Lamp Adjustment Screw, 4.85 in L | 195145-003 |
| 4 | Bracket Vertical Adjustment | 195499-001 |
| 5 | Universal Joint | 598931-554 |
| 6 | Plate, Vertical Adjustment | 195758-001 |
| 7 | Compression Spring 20 COIL | 515610-047 |
| 8 | Screw, Shoulder, 4-40 x 0.5 in L | 598931-619 |
| 9 | Pivot Ball | 194512-002 |
| 10 | Screw, Socket Head Cap, 8-32 x 1.25 in L | -- |
| 11 | Screw, Socket Head Cap, 10-32 x 0.625 in L | 598931-049 |
| 12 | Rear Adapter, Lamp | 194513-003 |
| 13 | Compression Spring, 1.094 OD | 515610-046 |
| 14 | Collar, Metal | 598931-553 |
| 15 | Lamp Adjustment Screw, 1.73 in L | 195145-004 |
| 16 | Horizontal Adjustment Plate | 195753-001 |
| 17 | Box Horizontal Adjustment | 195752-001 |
| 18 | Shoulder Washer | 515000-002 |
| 19 | Spring Washer | 515801-202 |
| 20 | Screw, Hex Head 1/4 -20 x .375 in L | - |
| 21 | Star Washer, 1/4" | - |
| 22 | Flex Braid Negative Lamp Lead (CXC) | 195224-002 |

Table A-5: Parts List for Manual Lamp Adjustment Assembly

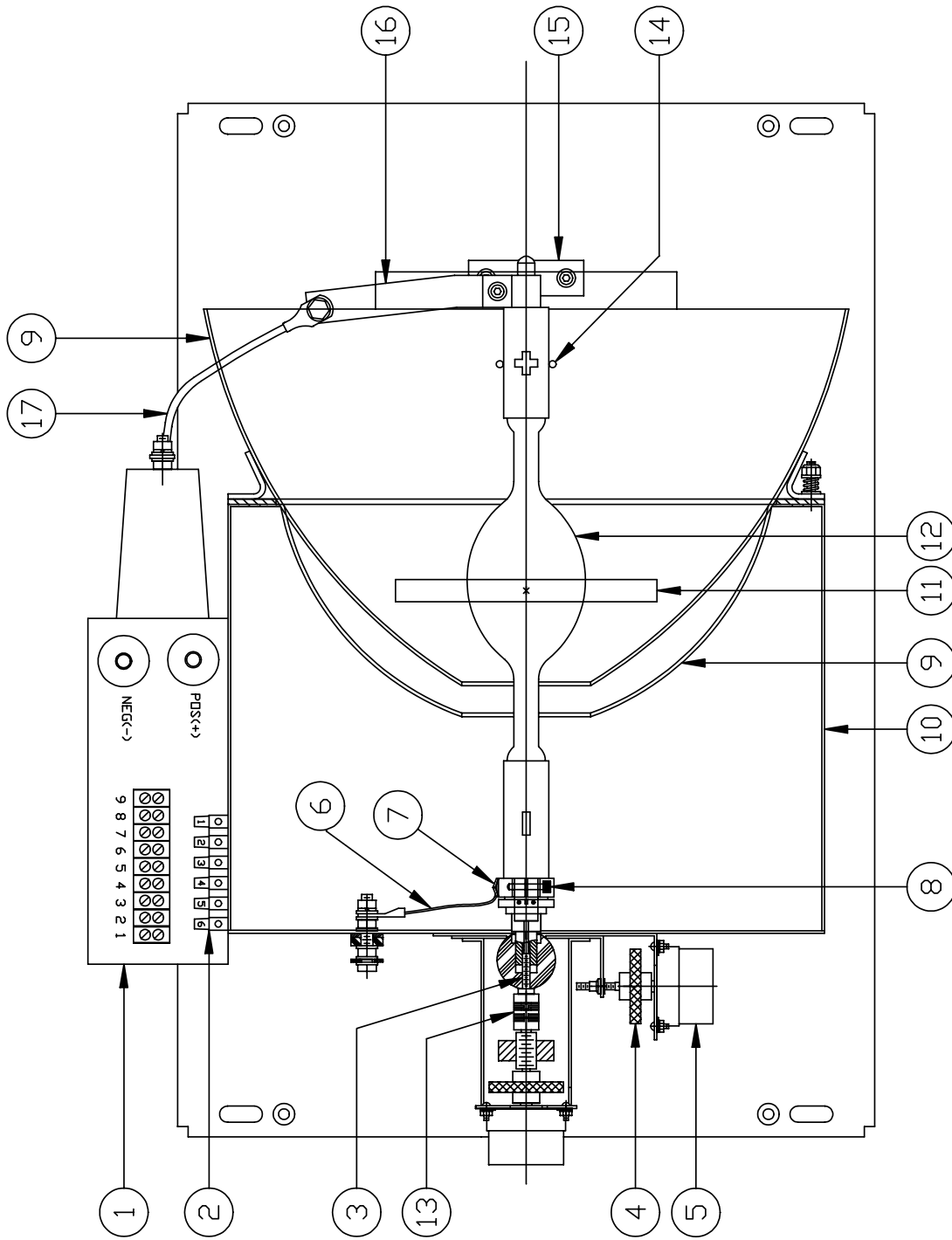
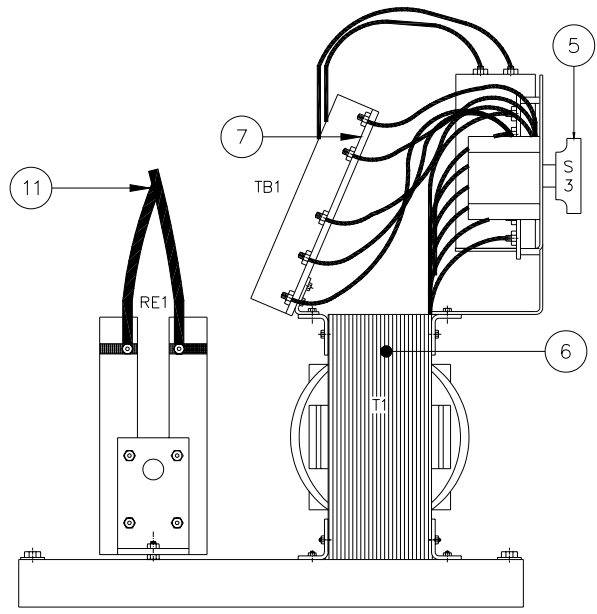
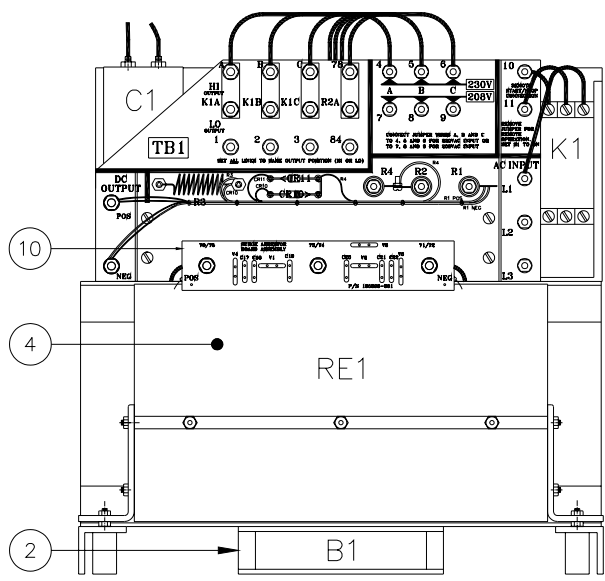
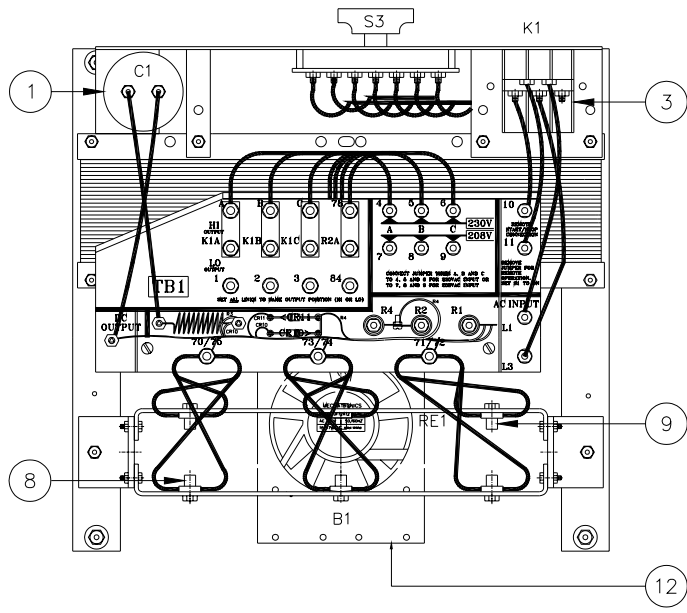


Figure A-6: Plenum , All Models (Top View)

| # | Description | Part Number |
|----|---|-------------|
| 1 | Igniter, IGA-10 | 116715-001 |
| | Igniter, IGA-15M | 117124-001 |
| 2 | Terminal Board, TB4 | 586210-602 |
| 3 | Focus Screw | 195182-001 |
| 4 | Wheel, Manual Lamp Adjustment | 195190-001 |
| 5 | Motor, Synchronous, Lamp Adjustment, 50 RPM | 582000-002 |
| 6 | Flex Braid Negative Lamp Lead (<i>SLC</i>) | 195224-002 |
| 7 | Negative Lamp Connector | 194513-003 |
| 8 | Allen Screw, #8-32 x 0.75 in L | 598931-046 |
| 9 | Reflector, 2000-3000 W Lamp (<i>SLC 20, 30</i>) | 195206-003 |
| | Reflector, 4000 W (<i>SLC 40, 45</i>) | 195891-001 |
| | Reflector, 4500 W (<i>SLC 45R</i>) | 195710-001 |
| | Reflector, 7000 W (<i>SLC 70</i>) | 195572-001 |
| 10 | Cover Support, Plenum | 195171-001 |
| | Front Support, Plenum | 195172-001 |
| 11 | Magnet, Arc Stabilizer | 515000-092 |
| 12 | Xenon Lamp, 7000 W * | CXL-70 |
| | Xenon Lamp, 1600 W Adapter * | CXL-16S |
| | Xenon Lamp, 2000 W * | CXL-20 |
| | Xenon Lamp, 3000 W * | CXL-30 |
| | Xenon Lamp, 4000 W * | CXL-40 |
| | Xenon Lamp, 4500 W * | CXL-45 |
| | Xenon Lamp, 6000 W * | CXL-60 |
| 13 | Shaft Coupling | 195532-001 |
| 14 | Lamp Support Arm | 193959-001 |
| 15 | Insulator, Lamp Support | 193958-002 |
| 16 | Forward Adapter, Positive Connector | 191925-001 |
| 17 | Lamp Lead, Positive Connector (<i>SLC 20,30,40, - 45, 70</i>) | 195224-002 |
| | * Specify SLC model number when ordering. | |

Table A- 6: Parts List for Plenum, All Models (Top View)



POWER SUPPLY

Figure A-7: Power Supply

| # | Description | Part Number |
|----|---|-------------|
| 1 | Capacitor (C1) (SLC 20, 30) | 530106-302 |
| | Capacitor (C1) (SLC 40, 45, 70) | 530122-009 |
| 2 | Blower, Fan, SLC (B1) | 522000-001 |
| 3 | Contactor, Relay (K1) 120V, (SLC 20, 30) | 571320-001 |
| | Contactor, Relay (K1) 120V, (SLC 40,45,45R,70) | 571340-004 |
| | Contactor, Relay (K1) 230V, (20/30) | 571320-002 |
| | Contactor, Relay (K1) 230V,(SLC 40,45,45R,70) | 571340-003 |
| 4 | Heat Sink Assembly, (RE1) (SLC 20, 30,) | 114109-002 |
| | Heat Sink Assembly (RE1) (SLC 40, 45, 45R, 70) | 195569-001 |
| 5 | Tap Switch Assembly, Lamp Current Adjustment | 111972-001 |
| 6 | Transformer, 208/230 VAC, 60 Hz (T1) (SLC 20/30) | 195773-001 |
| | Transformer, 380/415 VAC, 50/60 Hz (T1) (SLC 20/30) | 195773-004 |
| | Transformer, 208/230 VAC, 60 Hz (T1) (SLC 40) | 195774-001 |
| | Transformer, 380/415 VAC, 50/60 Hz (T1) (SLC 40) | 195774-004 |
| | Transformer, 208/230 VAC, 60 Hz (T1) (SLC 45/70) | 195775-001 |
| | Transformer, 380/415 VAC, 50/60 Hz (T1) (SLC 45/70) | 195775-004 |
| | Transformer, 208/230 VAC, 60 Hz (T1) (SLC 45R/70R) | 195775-001 |
| | Transformer, 380/415 VAC, 50/60 Hz (T1) (SLC 45R/70R) | 195775-004 |
| 7 | Control Assembly, 60 Hz (TB1) (SLC 40, 45, 7/ | 114173-001 |
| | Control Assembly, 60 Hz (TB1) (SLC 20, 30) | 114173-002 |
| | Control Assembly, 50 Hz (TB1) (SLC 30, 40, 45, 70) | 114173-010 |
| | Control Assembly, 50 Hz (TB1) (SLC 20) | 114173-011 |
| 8 | Diode, Reverse Polarity, Negative (-), 1000V, 150 Amp | 541108-010 |
| | Diode, Reverse Polarity, Negative (-), 1400V, 85 Amp | 541109-004 |
| 9 | Diode, Normal Polarity, Positive (+), 1000V, 150 Amp | 541108-009 |
| | Diode, Normal Polarity, Positive (+), 1400V, 85 Amp | 541109-003 |
| 10 | Surge Arrester Board Assembly | 195390-001 |
| 11 | DC Cable Kit (SLC 20, 30, 40) | 194657-001 |
| | DC Cable Kit (SLC 45, 45R, 70) | |

Table A-7: Power Supply

Appendix B

Appendix B: Additional Diagrams

Appendix B contains additional support information in the form of circuit diagrams for the console system (inserts), igniters, and front and side views of the SLC Console, including dimensions.

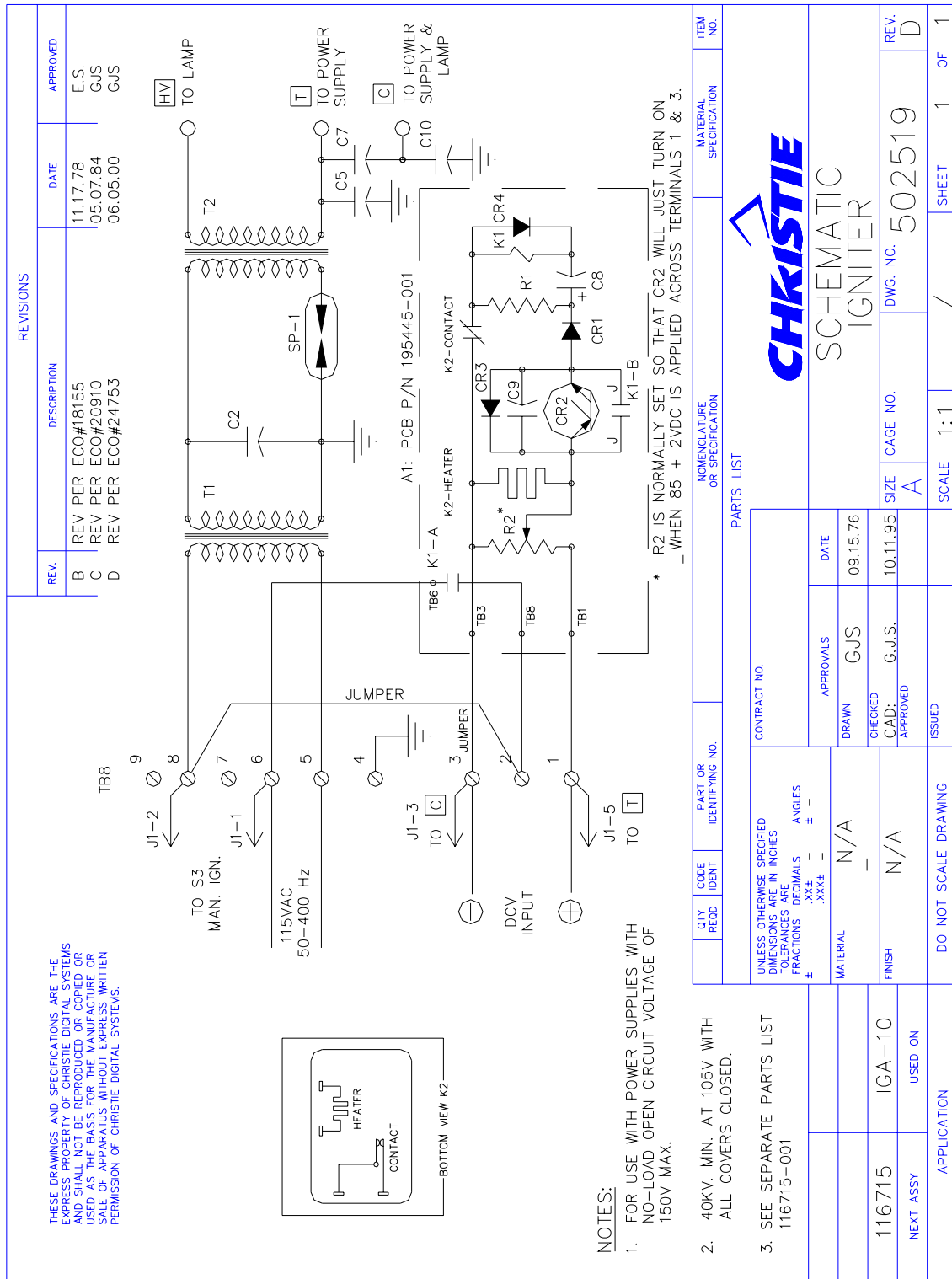
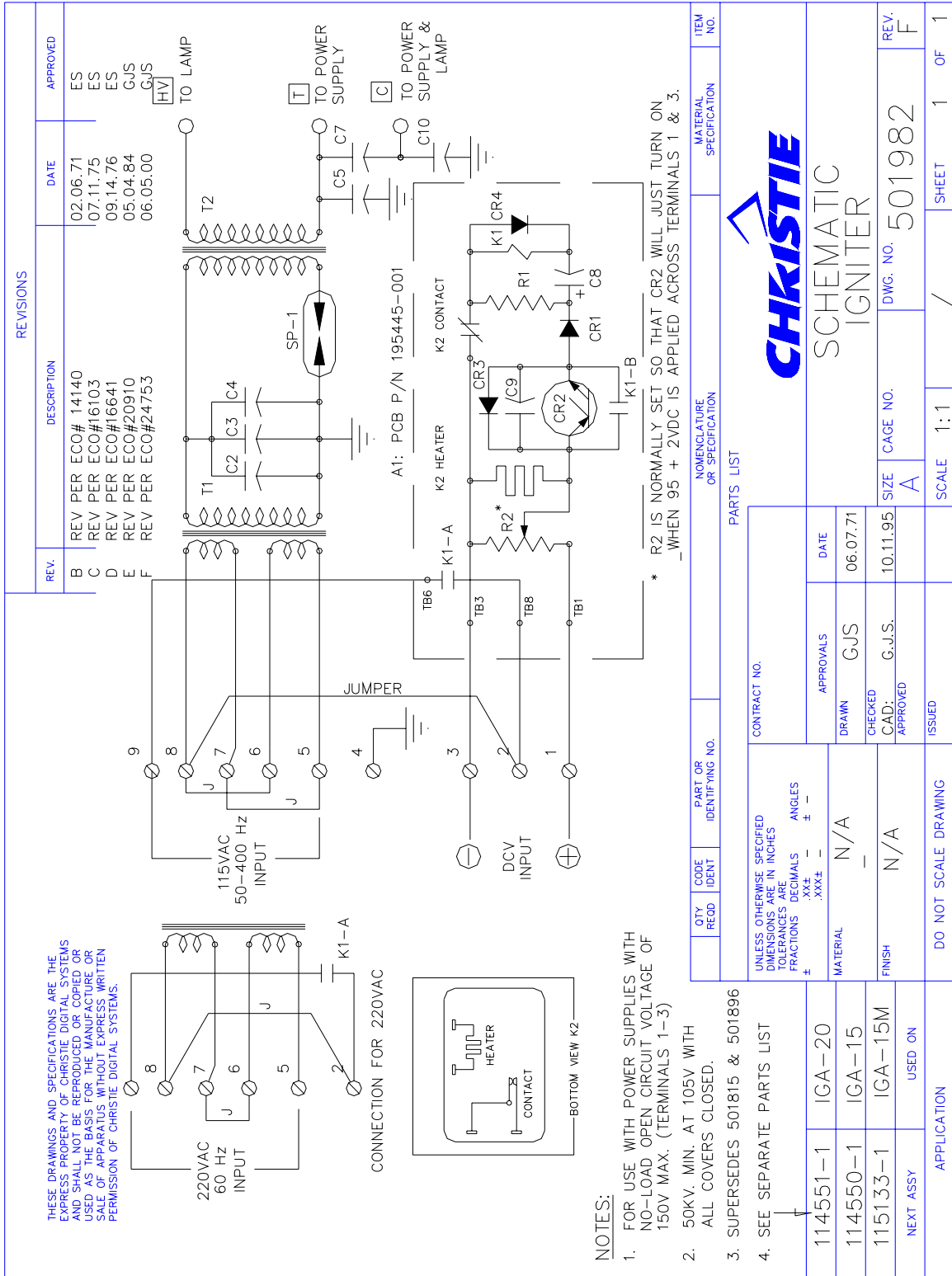


Figure B-1: Schematic Diagram for IGA-10 Igniter (P/N 502519)



NOTES:

1. FOR USE WITH POWER SUPPLIES WITH NO-LOAD OPEN CIRCUIT VOLTAGE OF 150V MAX. (TERMINALS 1-3)
2. 50KV. MIN. AT 105V WITH ALL COVERS CLOSED.
3. SUPERSEDES 501815 & 501896
4. SEE SEPARATE PARTS LIST

| CONTRACT NO. | DATE |
|---------------|----------|
| | 06.07.71 |
| APPROVALS | GJS |
| DRAWN | GJS |
| CHECKED | G.J.S. |
| CAD: APPROVED | G.J.S. |
| ISSUED | |

| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES | ANGLES |
|---|--------|
| FRACTIONS DECIMALS .XX± .XXX± | ± |
| MATERIAL | N/A |
| FINISH | N/A |

| QTY | CODE | PART OR IDENTIFYING NO. | NOMENCLATURE OR SPECIFICATION | MATERIAL SPECIFICATION | ITEM NO. |
|-----|------|-------------------------|-------------------------------|------------------------|----------|
| | | | | | |



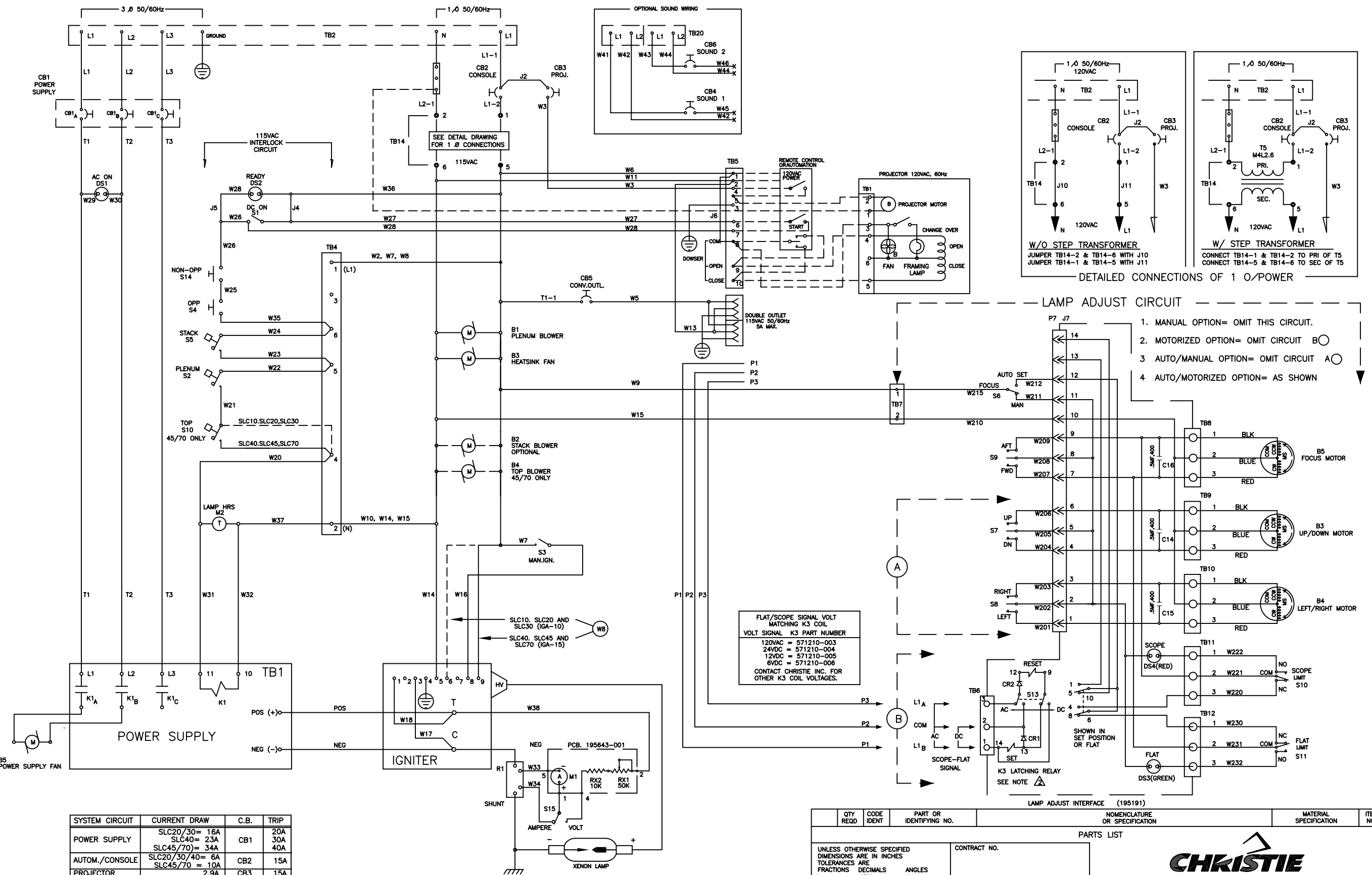
PARTS LIST

| SCALE | SHEET | OF |
|-------|-------|----|
| 1:1 | / | 1 |

Figure B-2: Schematic Diagram for IGA-15M Igniter (P/N 501982)

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| REVISIONS | | | | |
|-----------|------|------------------------|----------|----------|
| ZONE | REV. | DESCRIPTION | DATE | APPROVED |
| | A | ORIGINAL ISSUE | 10.15.01 | GJS |
| | B | REV PER ECO #25341 | 04.08.04 | JL |
| | C | ECO #25493 -B5 FAN PWR | 06.02.04 | GVB |



| SYSTEM CIRCUIT | CURRENT DRAW | C.B. | TRIP |
|----------------|--|---------|-------------------|
| POWER SUPPLY | SLC20/30= 16A SLC40= 23A SLC45/70= 34A | CB1 | 20A 30A 40A |
| AUTOM./CONSOLE | SLC20/30/40= 6A SLC45/70 = 10A | CB2 | 15A |
| PROJECTOR | 2.9A | CB3 | 15A |
| SOUND SYSTEM | 2 X 25A | CB4/CB6 | 30A |
| CONV. OUTLET | 5A | CB5 | 15A |

NOTES: UNLESS OTHERWISE SPECIFIED

FLAT/SCOPE SIGNAL VOLT MATCHING K3 COIL
VOLT SIGNAL K3 PART NUMBER
120VAC = 571210-003
24VDC = 571210-004
12VDC = 571210-005
6VDC = 571210-006
CONTACT CHRISTIE INC. FOR OTHER K3 COIL VOLTAGES.

1. MANUAL OPTION= OMIT THIS CIRCUIT.
2. MOTORIZED OPTION= OMIT CIRCUIT B
3. AUTO/MANUAL OPTION= OMIT CIRCUIT A
4. AUTO/MOTORIZED OPTION= AS SHOWN

| QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR SPECIFICATION | MATERIAL SPECIFICATION | ITEM NO. |
|---|------------|-------------------------|-------------------------------|------------------------|----------|
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE FRACTIONS DECIMALS ANGLES ± .XX± ± .XXX± ± | | | CONTRACT NO. | | |
| MATERIAL N/A | | | APPROVALS DATE | | |
| SLC 115VAC I/L | | | DRAWN GJS 10/16/01 | | |
| NEXT ASSY USED ON | | | CHECKED | | |
| APPLICATION DO NOT SCALE DRAWING | | | APPROVED | | |
| | | | ISSUED | | |
| SIZE C | | CAGE NO. | | DWG. NO. 503478 | |
| SCALE 1:1 | | SHEET 1 | | REV. C | |

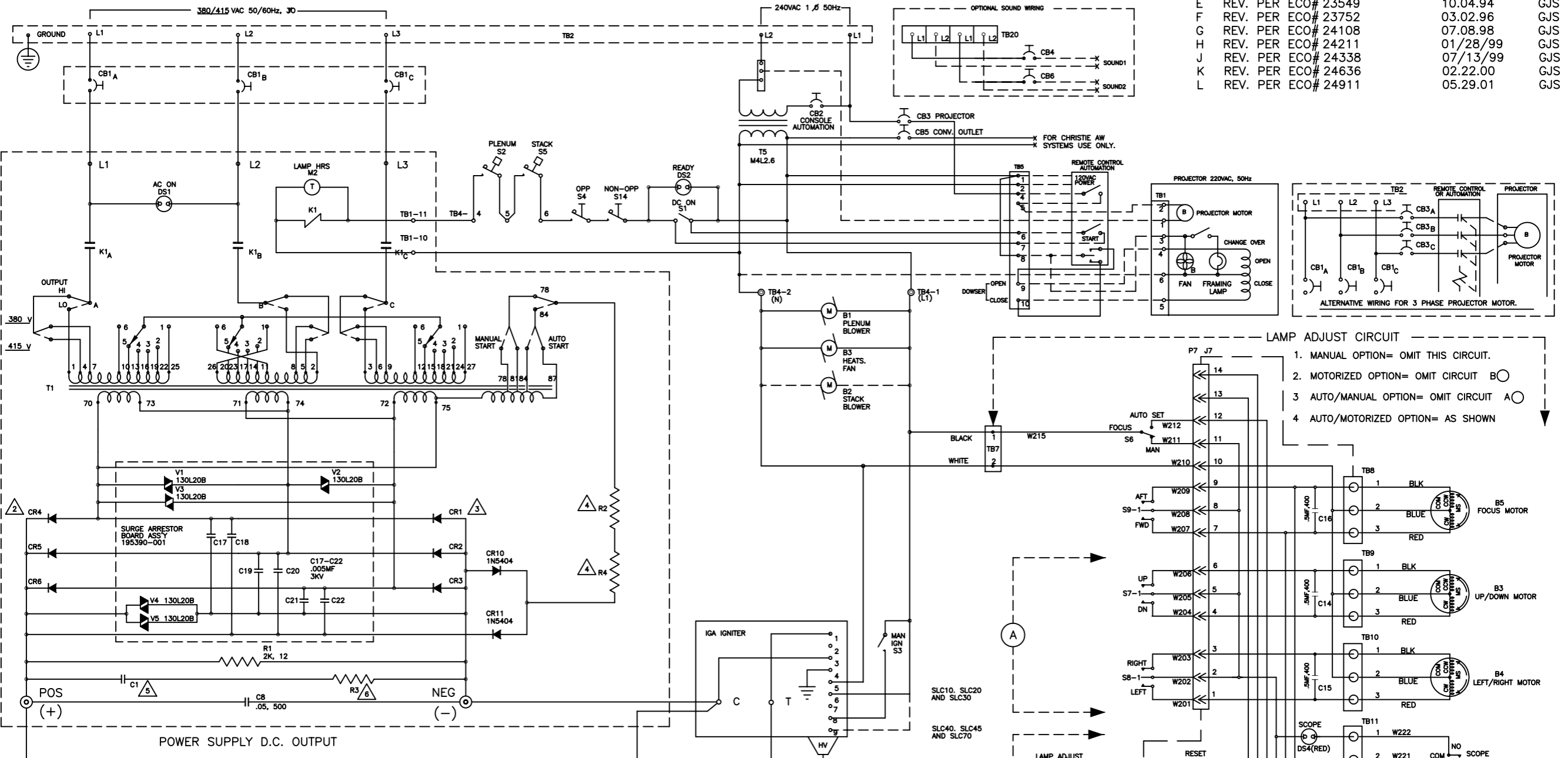


UNIVERSAL SCHEMATIC
SLC 115V INTERLOCK

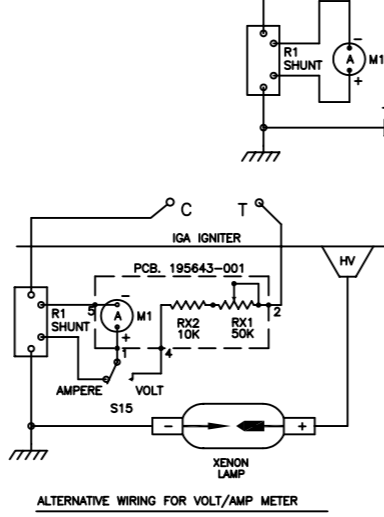
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| SYSTEM CIRCUIT | CURRENT DRAW | CIRCUIT BREAKER |
|----------------|--------------------------------------|-----------------|
| AUTOM./CONSOLE | SLC20/30/40= 6 A SLC45/70 = 10 A | CB2 15A |
| PROJECTOR | 2.9A | CB3 15A |
| CONV. OUTLET | 5 A | CB5 15A |
| SOUND SYSTEM | 2 X 25 A | CB4/CB6 30A |
| POWER SUPPLY | SLC20/30/40= 26 A SLC45/70)= 36 A | CB1 30A 40A |

| REVISIONS | | | | |
|-----------|------|---------------------|----------|----------|
| ZONE | REV. | DESCRIPTION | DATE | APPROVED |
| A | | ORIGINAL ISSUE | 05.20.93 | GJS |
| B | | REV. PER ECO# 23406 | 05.20.93 | GJS |
| C | | REV. PER ECO# 23479 | 05.26.94 | GJS |
| D | | REV. PER ECO# 23494 | 06.20.94 | GJS |
| E | | REV. PER ECO# 23549 | 10.04.94 | GJS |
| F | | REV. PER ECO# 23752 | 03.02.96 | GJS |
| G | | REV. PER ECO# 24108 | 07.08.98 | GJS |
| H | | REV. PER ECO# 24211 | 01/28/99 | GJS |
| J | | REV. PER ECO# 24338 | 07/13/99 | GJS |
| K | | REV. PER ECO# 24636 | 02.22.00 | GJS |
| L | | REV. PER ECO# 24911 | 05.29.01 | GJS |



- 6 R3 = #15 NICHROME, 22" FOR SLC10
R3 = #14 NICHROME, 19" FOR SLC20
R3 = #15 NICHROME, 13.5" FOR SLC30
R3 = #12 NICHROME, 9" FOR SLC40
 - 5 C1 = 6000MF, 160V FOR SLC10, SLC20 AND SLC30
C1 = 22000MF, 160V FOR SLC40
 - 4 R2 AND R4:
CONNECTED SERIES SLC10, SLC20, 50 OHM, 50 WATT
CONNECTED SERIES SLC30, 50 OHM, 50 WATT
CONNECTED PARALLEL SLC40, 50 OHM, 50 WATT
 - 3 CR1, CR2 AND CR3=85HFR100 FOR SLC10, SLC20 AND SLC30
CR1, CR2 AND CR3=150KR60A FOR SLC40
 - 2 CR4, CR5 AND CR6=85HF100 FOR SLC10, SLC20 AND SLC30
CR4, CR5 AND CR6=150K60A FOR SLC40
1. AS SHOWN CONSOLE IS SET IN HI-OUTPUT FOR 3 Ø INPUT AND CONNECTED FOR AUTOMATIC STARTING



NOTE:
1. FOR 120V AC SCOPE-FLAT SIGNAL P/N OF K3 IS 571210-003
2. FOR 24V DC SCOPE-FLAT SIGNAL P/N OF K3 IS 571210-004.
3. CONTACT CHRISTIE FOR OTHER SCOPE-FLAT INPUT SIGNALS.

| | |
|-------------|---------|
| SLC40-Z34 | |
| SLC30-Z34 | |
| SLC20-Z34 | |
| SLC10-Z34 | |
| NEXT ASSY | USED ON |
| APPLICATION | |

| QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR SPECIFICATION | MATERIAL SPECIFICATION | ITEM NO. |
|--|------------|-------------------------|--------------------------------------|------------------------|----------|
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE FRACTIONS DECIMALS ANGLES ± .XXX± .XXX± ± | | | CONTRACT NO. | | |
| MATERIAL N/A | | | APPROVALS DATE | | |
| FINISH N/A | | | DRAWN GJS 05.20.93 | | |
| NEXT ASSY USED ON | | | CHECKED | | |
| APPLICATION | | | APPROVED | | |
| DO NOT SCALE DRAWING | | | ISSUED | | |
| | | | SIZE CAGE NO. DWG. NO. 503335 REV. L | | |
| SCALE 1:1 | | | SHEET 1 OF 1 | | |

CHRISTIE
SCHEMATIC
SLC 380/415V, 50/60HZ

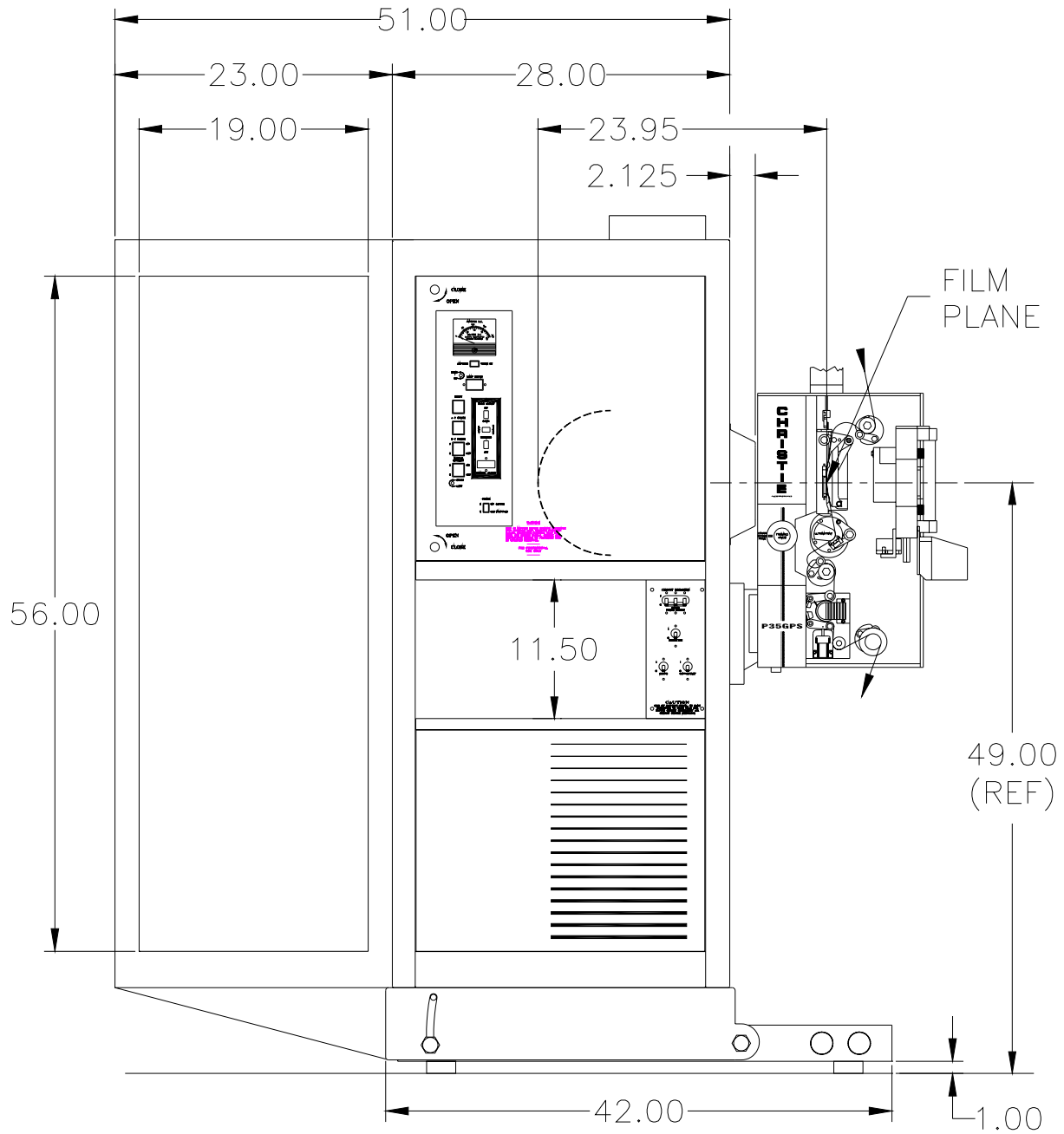


Figure B-3: SLC 20-CC20, SLC 30-CC25 Console (Side View)

(P35 Projector head shown for reference)

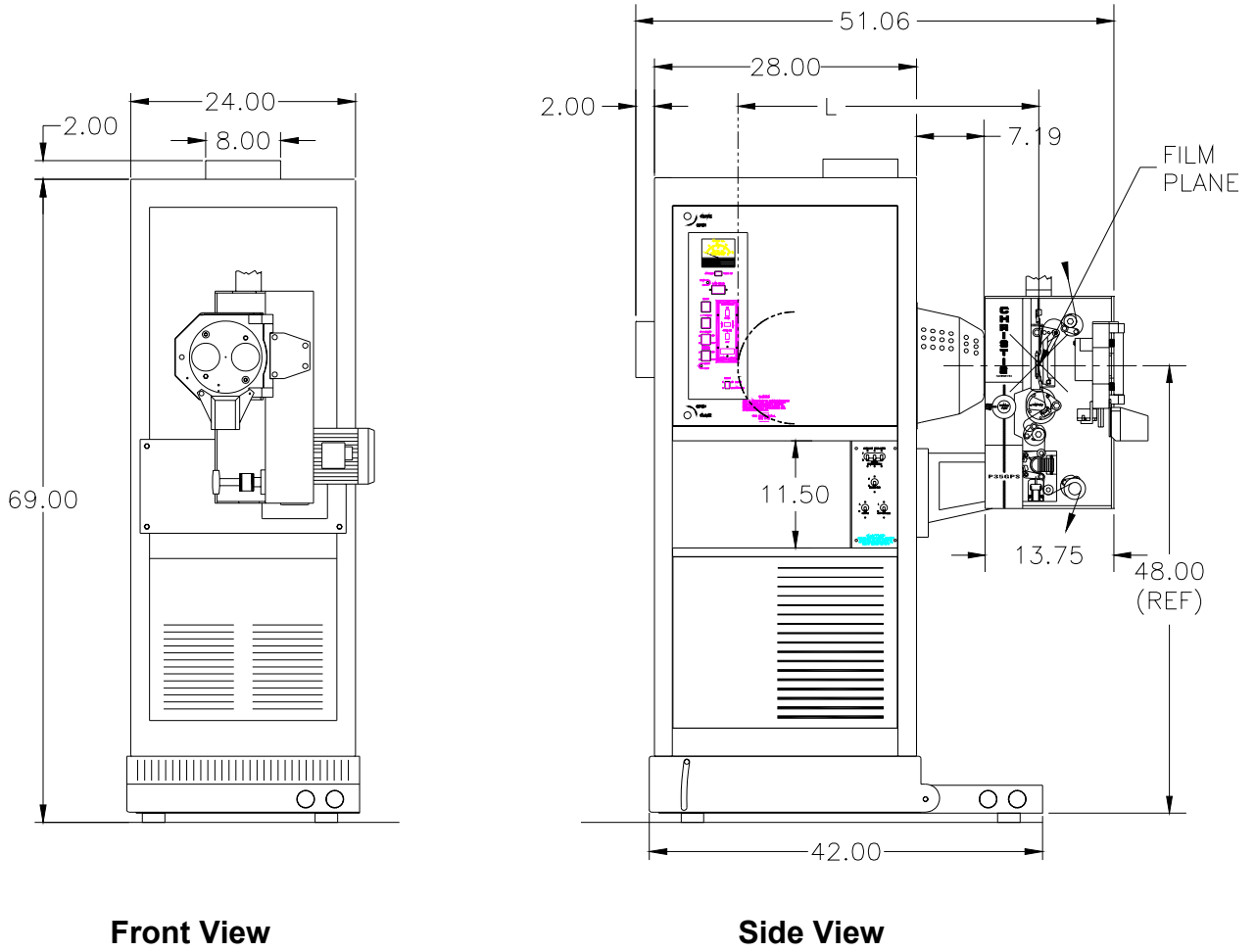


Figure B-4: Console SLC 40-CC40, SLC 45-CC70, SLC 70-CC70

(P35 projector head shown for reference)